

CHILTON'S

MOTOR AGE

January, 1960



14th ANNUAL
AUTOMOTIVE SERVICE IDEAS ISSUE
AND PREVIEW OF THE INTERNATIONAL A.S.I. SHOW

What does *Dependability* mean to you?

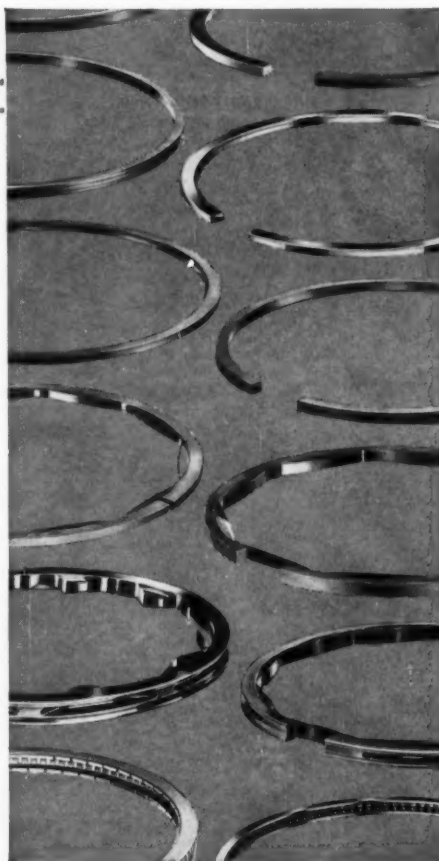
When a set of rings is installed in an engine, at least two people are interested in what happens: the installing mechanic, and the operator. To us, **DEPENDABILITY** means that neither of them is disappointed.

Perfect Circle builds dependability into each ring set in these ways:

By unsurpassed craftsmanship in manufacture, to assure consistently excellent initial performance.

By scientific selection of materials for maximum performance in specific ring grooves.

By skillful engineering design, to assure lowest rate of wear...longest useful life.



PERFECT

PISTON RINGS



CIRCLE

POWER SERVICE PRODUCTS

Hagerstown, Indiana

In Canada: Don Mills, Ontario

ANOTHER **BLUE STREAK** SECRET
SERVICE TIP FOR YOU...

SHERLOCK MCKANICK and MIKE

OUR HEROES GO TO AN
IGNITION FILM CLINIC...

HEY, SHERLOCK,
JONES AUTO SUPPLY
SENT US AN INVITATION
TO AN **IGNITION FILM
CLINIC!**

I'M ALWAYS
IN FAVOR OF
INSTRUCTION
IN IGNITION,
MIKE!

TEN DAYS LATER...

SAY, SHERLOCK, THAT
GUY IN THE **BLUE
STREAK FILM** LOOKS
A LOT LIKE YOU!

HANDSOME CHAP,
ISN'T HE?

MR. JONES, YOUR
SPONSORSHIP OF THIS
**BLUE STREAK IGNITION
FILM CLINIC** IS A
WONDERFUL CONTRIBUTION
TO BETTER IGNITION
SERVICING!

GLAD YOU
ENJOYED
IT, BOYS!
MORE
REFRESHMENTS?

**BLUE STREAK
IGNITION FILM
CLINIC**

DEALERS: NO MATTER
WHAT IGNITION LINE YOU
CARRY, WATCH FOR
YOUR INVITATION TO THE
**BLUE STREAK IGNITION
FILM CLINIC.** YOU'LL
SEE THE SEVEN **DO'S**
AND **DON'T'S** OF
IGNITION....

...AND WAIT'LL YOU SEE
MISS WATSON IN THE **BLUE
STREAK FILM!**

WOW!

**WRITE: FILM
STANDARD MOTOR PRODUCTS, INC.
LONG ISLAND CITY 1, NEW YORK
FOR SCHEDULES OF CLINICS
IN YOUR AREA.**

NO WONDER 42,000
DEALERS SAY THAT
"**BLUE STREAK IGNITION**
IS BETTER FOR
YOUR BUSINESS!"

WORLD'S FOREMOST
HEAVY-DUTY
IGNITION LINE

BLUE STREAK

REGULATORS • SWITCHES • COILS • CONDENSERS • CONTACT POINTS • WIRE and CABLE

"...top-flight collection service"

says K. A. CHILDS, Ford dealer,
Kingsville, Texas

"There is plenty of activity in our area what with a naval training station and a college nearby. With such a transient trade we needed a really top-flight collection service and we found it in COMMERCIAL CREDIT. Our salesmen sell the finance plan as they sell the car, stressing the nationwide service and convenience of COMMERCIAL CREDIT PLAN. The merchandising and sales helps provided by COMMERCIAL CREDIT are put to good use in the closing room."

Commercial Credit dealers are successful dealers

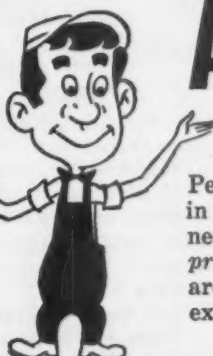
Write or call the nearest COMMERCIAL CREDIT CORPORATION office for complete information on the benefits of COMMERCIAL CREDIT PLAN. Why not do it, today?



A service offered through subsidiaries of the Commercial Credit Company, Baltimore . . . Capital and Surplus over \$225,000,000 . . . offices in principal cities of the United States and Canada.








Still the champs
... made for the Professional!



ALL SEALANTS ARE NOT ALIKE!

Permatex tailors automotive sealants to the job... builds in features to match special needs of modern vehicles. You need hard and soft sealing... slow and fast sealing... professional sealants on which you can depend. Here they are, engineered by Permatex to do the best possible job, exactly right.

SEALANT	FORM	DRYING SPEED	SETTING	USES	FEATURES
FORM-A-GASKET NO. 1  With Special Spreader Cap	Paste	Fast	Hard	Permanent assemblies; broken gaskets and fittings; building up uneven and warped surfaces; sealing damaged thread connections; replacement of unavailable gaskets.	Withstands heat and pressures up to 5000 lbs./sq. inch, during continuous service.
FORM-A-GASKET NO. 2  With Special Spreader Cap	Paste	Slow	Pliable	For reassembly work where adjustments or disassemblies are likely. Ideal for cover plates, threaded and hose connections, and preservation of all types of solid gaskets.	Perfect seal, allows disassembly without damage even after subjection to heat, pressure and long use. For pressures up to 5000 lbs./sq. in.
AVIATION FORM-A-GASKET NO. 3 	Brushable liquid	Medium	Tacky	Lubricates close-fitting parts for easy assembly, and keeps seal tight, corrosion-free, yet allows easy disassembly.	Won't run at high temperatures or become brittle at sub-zero temperatures. Resists pressures up to 5000 lbs./sq. in.
SUPER "300" FORM-A-GASKET 	Brushable, heavy-bodied liquid	Slow	Firm	For assembly work on newer high compression engines and milled heads, diesel heads, cover plates and transmission housings.	Diester resistant. Resists "washing" action of detergent additives for auto lubricants and aviation jet fuels. Pressures to 6000 lbs./sq. in.
STICK-N-SEAL 	Full-bodied liquid of Buna-N type synthetic rubber	Fast	Tacky	Holds gaskets or other material in place for easy assembly and eliminates "delayed action" leaks after job is done.	Combines outstanding initial tackiness with resistance to gasoline, oils, water, glycol, kerosene. Unaffected by lubricants which dissolve ordinary rubber cements.



STOCK ALL THESE PERMATEX SEALANTS... made for the Professional! PLUS Permatex Gasket Cement, Permatex Pipe Joint Compound. Order from your jobber today.

PERMATEX

COMPANY, INC.

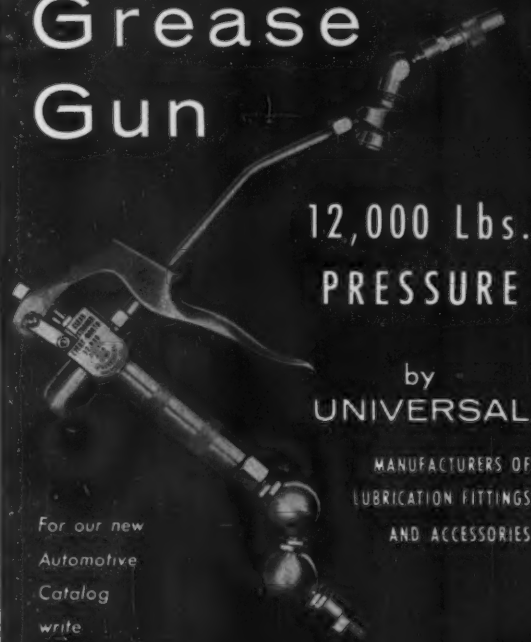
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SEALING COMPOUNDS • POLISHES AND CLEANERS • RADIATOR PRODUCTS • SERVICE OILS AND FLUIDS • SERVICE AND REPAIR PRODUCTS

Chilton's MOTOR AGE • January 1960

Grease Gun



12,000 Lbs.
PRESSURE

by
UNIVERSAL

MANUFACTURERS OF
LUBRICATION FITTINGS
AND ACCESSORIES

For our new
Automotive
Catalog
write

UNIVERSAL LUBRICATING SYSTEMS, Inc.
Automotive Division • Oakmont, Pa.

ZOOM your profits!

Be offering more than the next guy . . . in less time spent on the job and more accuracy in pinpointing troubles . . . your customer list and profits will grow and grow. Customer confidence in your work increases, your parts sales increase, the money in your pocket increases. Contact us for a free demonstration or for detailed literature.



DUMONT
EnginScope*

*Trade Mark

Automotive Test Equipment Division
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RUSSELL W. CASE, JR., Publisher

Charles W. Hevner, Assistant Publisher
E. H. Miller, Advertising Manager
E. W. Hevner, Circulation Manager
H. Clifford Parris, Research Manager

Address Mail to Motor Age
Chestnut & 56th Sts., Phila. 39, Pa.
Phone: SHerwood 8-2000

REGIONAL MANAGERS

ATLANTA 3, GEORGIA

John W. Sangston
911 William Oliver Bldg.
32 Peachtree St., N.E.
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CHICAGO 1, ILLINOIS

Curtis F. Moss—James D. Moss
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Frank W. McKenzie
1355 Market St.
Phone UNderhill 1-9737

WASHINGTON EDITORIAL OFFICE

National Press Bldg., Washington 4, D.C.

One of the Publications
Owned by

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Executive Offices

Chestnut & 56th Sts.
Philadelphia 39, Pa., U.S.A.

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CHILTON'S MOTOR AGE

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JANUARY 1960

Vol. 79, No. 2

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MOTOR AGE, Published monthly by Chilton Company, Chestnut & 56th Sts., Philadelphia 39, Pa. Second-class mail privileges authorized at Philadelphia, Pa. with additional entry at Easton, Pa. Subscription price: United States, United States Possessions, \$4.00 for one year, \$7.00 for two years; Canadian, Foreign, \$5.00 per year, \$8.00 for two years; single copies 40 cents. COPYRIGHT 1960 by CHILTON COMPANY.

**the
greatest
automotive
sealing
service
on earth**



Victor Gasket Guide—Master Edition for Counter Catalogs

Victor Gasket List—Condensed Edition of the Guide for Shop Use

Victor Oil Seal Guide—Master Edition for Counter Catalogs

Victor Oil Seal List—Condensed Edition of the Guide for Shop Use

Victor Mfg. & Gasket Co., P. O. Box 1333, Chicago 90, Ill. • Canadian Plant: St. Thomas, Ontario

VICTOR

GASKETS • OIL SEALS • PACKINGS

The 100% Coverage Line . . . for Cars, Trucks, Tractors, Stationary Engines

Visit with Victor at the IASI Show—Booths 2738 to 2744



THERE'S
NOTHING LIKE
A NEW CAR!



THERE'S
NOTHING
LIKE
A NEW CAR!



Right now American families are *really ready* for a new car! They have more disposable income than ever before—along with the leisure time to enjoy it like never before. Economic authorities predict this trend will continue—with income and living standards during the next ten years to be far in excess of what we witness even in *today's* unprecedented prosperity!

To help insure a continuing share in the benefits of such an expanding economy for General Motors dealers, this new advertising campaign attaches real *excitement* to new car ownership. Readers are reminded of the pleasure, comfort, safety that go with their purchase of a new car—told that nothing they can buy can return so much for so long as will their investment in the exciting new styling and engineering features of the 1960 General Motors cars.

Traffic-building ads like the one on the left will be seen by millions in leading national publications. Watch for them—you'll see why it will be great to be a GM dealer in the Sixties!



GENERAL MOTORS
GO GM FOR '60

CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • CADILLAC • ALL WITH BODY BY FISHER

with Wagner Lockheed--the Quality line--

Wagner
Quality
first in the field!



ONE CALL GETS ALL
your brake service needs
from one source — your Dis-
tributor of Wagner Products.

LOCKHEED BRAKE PARTS, FLUID, BRAKE LINING and LINED BRAKE SHOES • AIR HORNS • AIR BRAKES • TACHOGRAPHS

you've got what it takes!

Wagner Lockheed

HYDRAULIC REPLACEMENT BRAKE PARTS

fit right...work right...

because they are made to original equipment standards of quality

You help protect the lives of your customers when you use Wagner Lockheed Replacement Brake Parts... These top-quality products fit and function correctly because they are manufactured by the same machinery — to the same specifications — as Wagner parts used for original equipment.

Line includes master and wheel cylinders, repair kits, pistons, springs, washers, cups, hose and all related items for every make and model vehicle. Available individually or in factory sealed kits.

Every product in this top-quality line is engineered to perform safely at the higher tempera-

tures generated in modern braking. This enables you to turn out better, safer brake jobs — and make more satisfied customers.

There's a supplier of Wagner Products located near you. Look to him for Wagner Lockheed Brake Parts, Brake Fluid, Power Brake Repair Kits, Brake Lining and Lined Brake Shoe Sets ... one call gets all!

Ask for details, or use coupon for FREE copy of 1960 Catalog AU-1. Also ask about how easily you can qualify to become a Wagner Franchised Dealer — and enjoy many special benefits.



ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

Wagner Electric Corporation

6498 Plymouth Ave., St. Louis 33, Mo., U. S. A.
(Branches in principal cities in U.S. and in Canada)

Please send:

- ☐ FREE copy of 1960 Catalog AU-1
- ☐ Details on Franchised Dealer Program

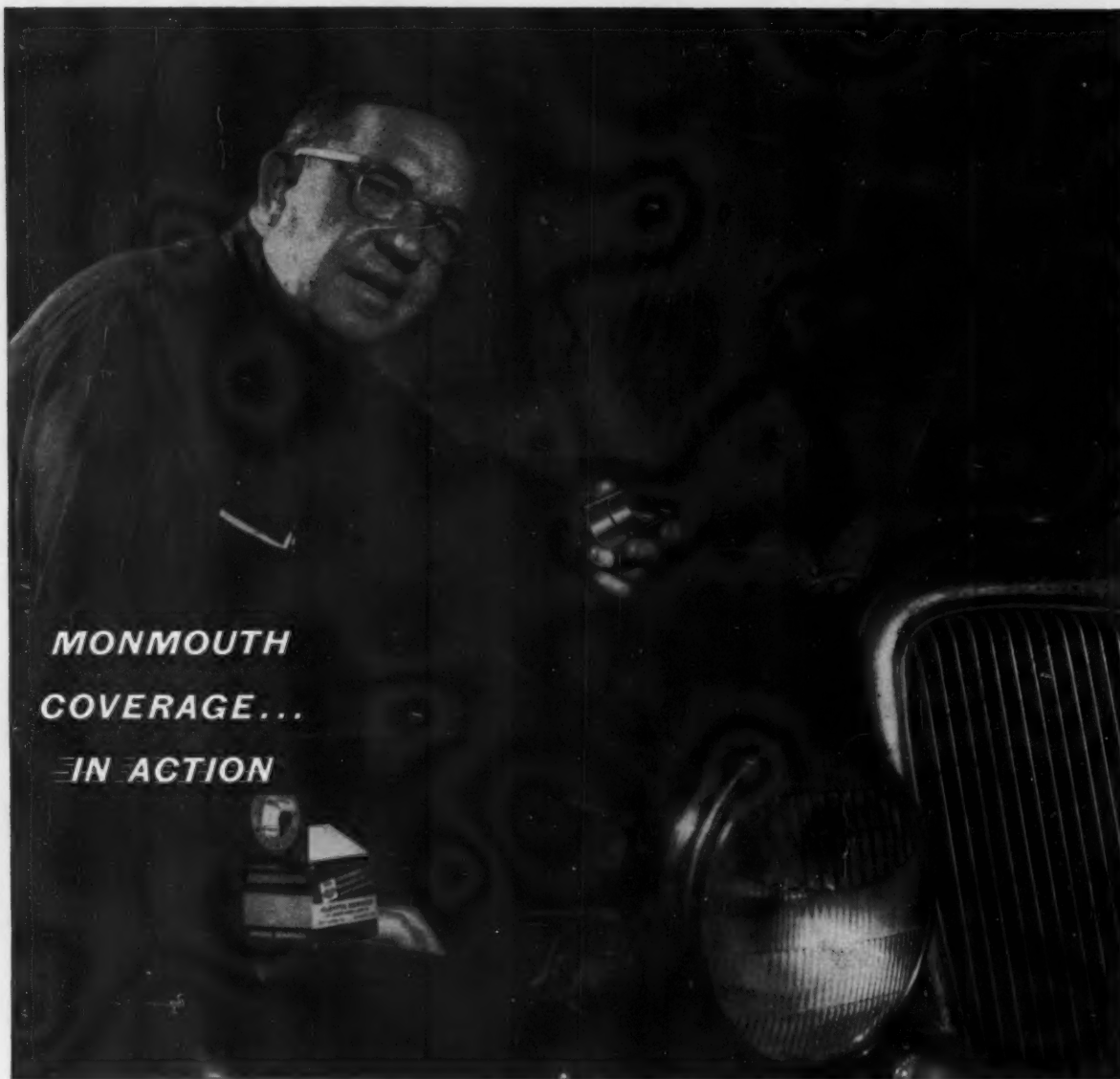
NAME _____

FIRM NAME _____

ADDRESS _____

CITY & STATE _____

WP60-1



"Brother! I call this a real bearing outfit

... when this '32 Ford came in for an engine overhaul, I didn't think my NAPA Jobber could come up with Monmouth engine bearings for this relic ... but he did, and that's what I call real coverage".

You, too, can count on your NAPA Jobber for fast service on the most complete line of engine bearings on the market. Monmouth has the right material in the right size for every engine job that comes into your shop.

Low premium "customer insurance" is yours when you install ...

MONMOUTH Engine Bearings

CLEVITE SERVICE: Cleveland Graphite Bronze • Division of Clevite Corporation • Cleveland 3, Ohio

says John Keirnan, independent garage owner of Cleveland, Ohio.

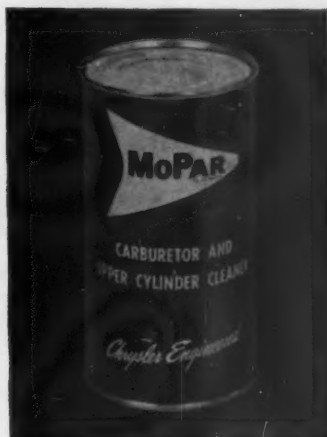


Stock these three hot MoPar items for cold-weather profits!

Start the new year right. Brighten your profit picture with the Big Three of MoPar's fast-selling, customer-pleasing engine care chemicals.

Winter driving makes your customers more aware of the importance of extra engine care. The selling opportunity is here. And MoPar has the products especially designed to maintain top engine performance.

Stock up on these Chrysler-engineered MoPar engine care materials now. Call your MoPar Wholesaler or Valiant, Plymouth, Dodge, DeSoto, Chrysler or Imperial Dealer today.



MoPar Carburetor and Upper Cylinder Cleaner. Poured directly into carburetor throat, cleans out passages, frees sticking valves and rings, leaves protective film on all upper engine parts. Part No. 1643 273 (16-oz. can).

MoPar Fuel Detergent and Valve Lubricant. Poured into gas tank, it helps protect fuel system from carbon deposits. Helps rustproof carburetor, fuel tank, intake manifold, combustion chamber. Part No. 1643 272 (6-oz. can).



MoPar Crankcase Detergent and Rust Inhibitor. Added to any quality motor oil, it cleans and protects engine parts, including hydraulic valve lifters. Reduces formation of carbon and sludge. Part No. 1643 271 (16-oz. can).



**Sell the line that keeps
your customers sold on you—MoPar**

**General Motors
announces
a new name
for its
Moraine Products
Division**

DELCO MORaine

BRAKE ASSEMBLIES • POWER BRAKES • BRAKE FLUIDS • BEARINGS • SINTERED METAL PARTS • FRICTION MATERIALS • DAYTON, OHIO

DEPENDABLY MADE



There
is
Only



me

Aero-Seal JET

WORM DRIVE HOSE CLAMP



An original product design will always be copied, but the genuine article keeps the confidence of the user by dependability. AERO-SEALS laugh at vibration and corrosion . . . hang on tightly . . . never shake loose or snap open. And they won't damage hose. Bands and housings are of 302-18-8 stainless steel. No extra cost for quick-attach Jets. Regular AERO-SEALS are also available.

Complete range of sizes from 7/16" up.



BREEZE CORPORATIONS, INC.

700 Liberty Avenue, Union, New Jersey Cable Address: Breeze, Union, N. J.



EXTRA WEIGHT ALONE SELLS IT, *but that's not all...*

Nothing sells mufflers like weight—and Merit has the weight that sells. The fine, solid weight of Merit says, "Here's a muffler with *more* heavy-gauge steel in its construction. Heavier outer heads. Heavier shell. Heavier inner parts. All to resist corrosion longer." *But that's not all...*

To clinch sales, Merit's heavier steel is *coated*, too. 3 out of 4 Merit mufflers you sell have coated

steel shells, and some of the fastest-moving numbers are coated *completely*, inside and out. And inside there's "Anti-Rust" design that keeps Merit Mufflers *dry*, cuts corrosion to a minimum. Your Merit sales pitch is simply unbeatable.

Make your move to Merit now... call your jobber. Tell him you *want* to cash in on Merit, the fastest growing muffler line in the industry.

The big move is to

MERIT

because Merit makes sales happen

MUFFLERS AND PIPES
Dept. 15A, 619 Smith St., Toledo 1, Ohio



keep
him
coming
back

*American
Brakeblok.*

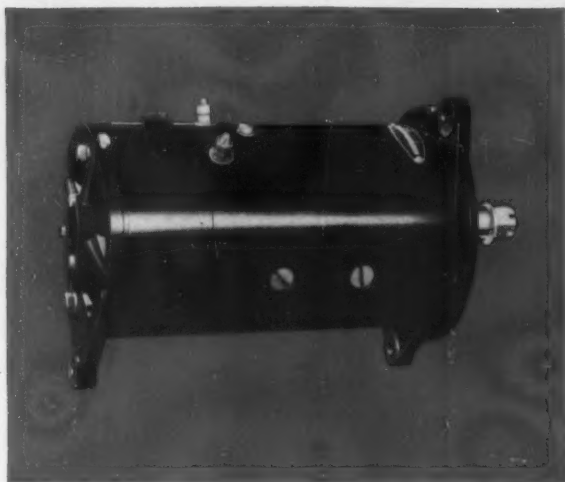


Highest quality keeps him coming back. Inferior goods sell only one time to any customer. American Brakeblok lining is the finest made anywhere. Riveted and bonded exchange are available through your NAPA jobber.

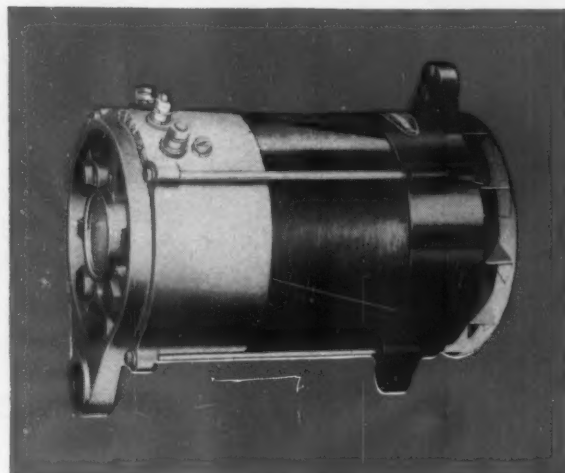
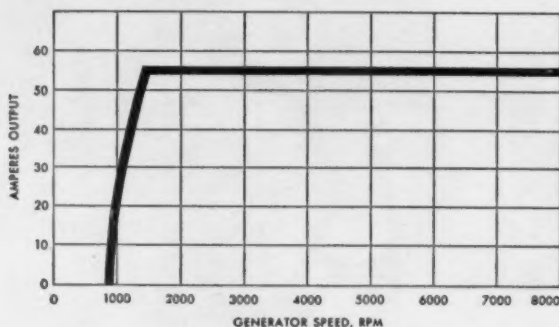
P.O. BOX 21, BIRMINGHAM, MICHIGAN
DIVISION OF AMERICAN BRAKE SHOE CO.

AMERICAN BRAKEBLOK

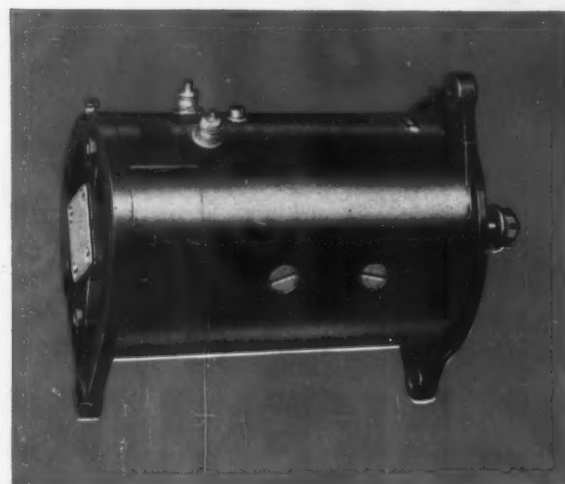
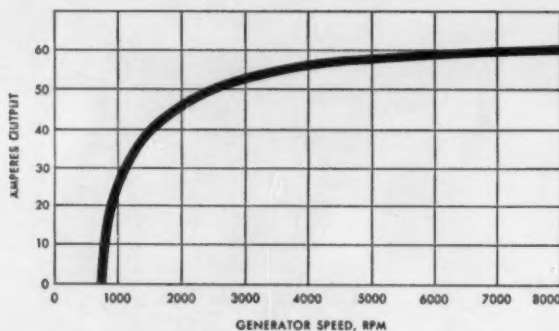
TAILOR YOUR TRUCKS



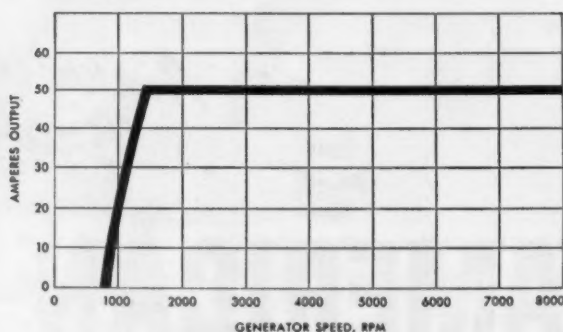
1106991 EXTRA-OUTPUT D.C. GENERATOR—12 volts • 55 amperes • 12 amperes at idle—For cross-country trucks, school buses and other vehicles with extra electrical equipment.



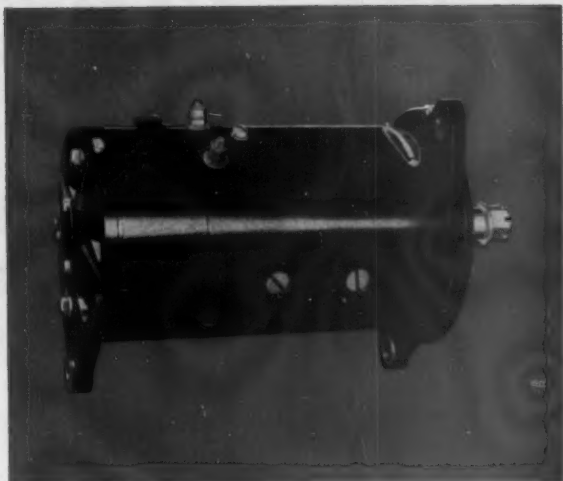
1117070 SELF-RECTIFYING A.C. GENERATOR—12 volts • 60 amperes • 27 amperes at idle—For high-duty vehicles with heavy electrical loads . . . operating at all speed ranges. Ideal for excessive low-speed operation and curb-idling.



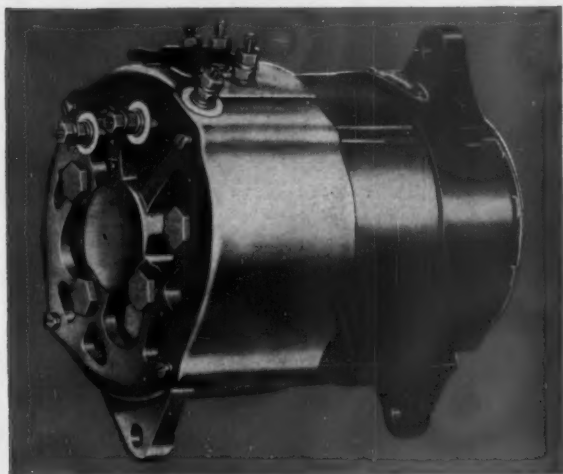
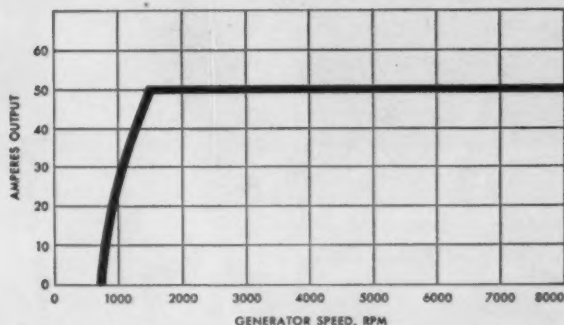
1106985 EXTRA-OUTPUT D.C. GENERATOR—12 volts • 50 amperes • 14 amperes at idle—Short frame generator for difficult mounting applications. For vehicles in city and suburban use. Not for cross-country operation.



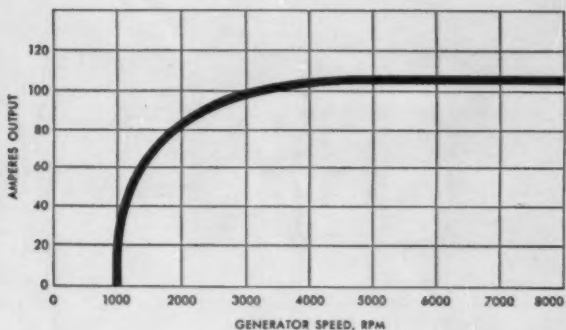
TO JOB CONDITIONS



1106986 EXTRA-OUTPUT D.C. GENERATOR—12 volts • 50 amperes • 20 amperes at idle—For metropolitan trucks and school buses, with extra electrical equipment . . . operating at low speeds and with engine idling most of the time.



1117115 SELF-RECTIFYING A.C. GENERATOR—12 volts • 105 amperes • 10 amperes at idle—For high-duty vehicles with extra-heavy electrical loads . . . operating at all speeds. A.C. voltage available for 110 V conversion.



Delco-Remy offers a complete line of A.C. and A.C.-D.C. generators that are right for the job.

Demands on the electrical systems of trucks vary with their use. For best performance, whether the vehicles be new or already in service, the electrical equipment should be job-matched to meet those demands.

Do your trucks have extra electrical equipment? Operate cross-country, around town or off the road? Do they travel at sustained highway speeds, or with plenty of

stop and go? Whatever their assignment, there are Delco-Remy extra-output generators and regulators job-matched to meet the electric power needs *exactly*.

Delco-Remy ELECTRICAL SYSTEMS



FROM THE HIGHWAY TO THE STARS
DIVISION OF GENERAL MOTORS • ANDERSON, INDIANA

"I'm Bill Stern,

Leading sportscaster Bill Stern will broadcast his "Monroe Sportsreel" twice every morning, Monday through Friday, over more than 300 stations of the Mutual radio network, beginning January 1.



MONRO-MATIC

SHOCK ABSORBERS

I'll help you sell

MONRO-MATIC SHOCKS AND LOAD-LEVELERS*"

"I'm joining one of the biggest promotional drives in the automotive service industry to bring you more customers for Monro-Matic shock absorbers and Load-Levelers*—two products that already have taken the trade by storm!

"My 'Monroe Sportsreel' will be beamed to

millions of car owners twice each morning, Monday through Friday, over your local Mutual network radio stations. I'll be tying in with Monroe's walloping advertising campaign in the top-circulation magazines to bring your sales of these two great Monroe ride control products to an all-time high!"

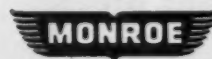
BILL STERN'S "MONROE SPORTSREEL" ADDS TERRIFIC IMPACT TO THIS BIGGEST OF ALL AUTOMOTIVE SERVICE CAMPAIGNS!

Millions of car owners—your customers—see big, *full-page* Monroe ads month after month in *LIFE*, *THE SATURDAY EVENING POST*, *POPULAR MECHANICS*, *SPORTS AFIELD*. (This advertising, while national in scope, is designed to whip up sales right in your community.) There's a landslide of Monroe promotional material available for you—newspaper mats, radio and TV spots, 24-sheet posters, display stands, window streamers, folders to hand to your customers—to help you tie in directly with this all-out campaign!



Monro-Matic shock absorbers stabilize a car, keep wheels from bouncing off the road, prevent hard steering and extra tire wear... give an extra measure of safety. The 60-day Free Ride guarantees customer satisfaction.

Load-Levelers*—Monroe stabilizing units with built-in ride control for a level ride under all road and load conditions—prevent bumping on driveways, swaying on curves, and "bottoming." Hottest item in the trade!



**Load-
Leveler**

STABILIZING UNIT

If you're not already tied in with this greatest of all Monroe promotions, check today with your jobber for details on the big profit-making deals waiting for you!

MONROE AUTO EQUIPMENT COMPANY • Monroe, Michigan

In Canada, MONROE-ACME LTD., Toronto, Ontario • In Mexico, MEX-PAR Box 21863, Mexico City

WORLD'S LARGEST MAKER OF RIDE CONTROL PRODUCTS

PUROLATOR'S

includes the new \$28⁵⁰



**This nationally advertised
\$28⁵⁰ SCHICK ELECTRIC RAZOR
costs you nothing
when you buy the 1960 Purolator Bonanza deal**

1960 BONANZA

SCHICK 3-SPEED RAZOR!

**Here's how you get your \$28⁵⁰ SCHICK
3-Speed Shaver at no extra cost!**

- ✓ Buy the Purolator Bonanza refill assortment of 30 fast-moving filters for \$47⁷⁷.
- ✓ Included right in the same package is your \$28⁵⁰ Schick Shaver.

Order from your Purolator Supplier today... *while they last!*

"Purolator" Reg. U. S. Pat. Off.



The Standard Equipment Line

PUROLATOR

OIL, AIR & FUEL FILTERS

PUROLATOR PRODUCTS INC., Rahway, N. J.; Toronto, Ontario, Canada

FIRST WITH THE FEATURES WITH NEW SALES APPEAL



**NEW VIBRA-TUNED BODY MOUNTS
GIVE OLDS FOR '60 THE QUIETEST RIDE
A PROSPECT EVER TRIED!**

**Olds Dealers Rocket Away
to Another Flying Sales Start
with a New
Demonstration "Natural"**

Silence is golden! Olds dealers are proving this every day, in the way their prospects react to the impressive quietness of the new '60 Oldsmobile. A quiet car *must* be a quality car! And Oldsmobile is the finest the medium-price class has to offer!

Oldsmobile's new quietness stems from many important advances in precision and balance, *plus Vibra-Tuned Body Mountings*. Olds bodies are supported at the "nodal points" (where vibration is at the minimum) on the chassis frame. Road tremors don't reach the interior of the car. Passengers ride in *quiet* comfort under every driving condition.

What a "natural" for a demonstration! What a wonderful reason to be with Olds . . . the car that's radiantly styled for the Rocketing Sixties!



OLDSMOBILE

DIVISION OF GENERAL MOTORS CORPORATION, LANSING, MICHIGAN

The Rochester-GM Service Line...

OPENS MORE OPPORTUNITIES FOR *MORE* SERVICE SALES



Price of New Replacement Units Cut by as Much as 1/3!

You can update your customers' performance with an original equipment Rochester-GM Carburetor replacement. And at *new low, low prices*, it'll be easier than ever to sell. The Rochester-GM Service Line is full of promise... full of pay-off for you and your customers. What's more, this Service Line is designed and engineered by the world's largest manufacturer of original equipment carburetors. Sell the Service Line that's going places fast! Order today from your UMS distributor. Rochester Products Division of General Motors, Rochester, New York.

This Rochester-GM Service special will be featured in colorful pages in *Popular Science* and *Popular Mechanics* during February. Look for it!

ORIGINAL EQUIPMENT CARBURETORS



Update your customers' performance
with the latest carburetor advances.
Now at special prices.

BT-3 TUNE- UP



Balanced tune-up three ways... Save time with recommended procedures and materials for top-quality tune-ups.

X-77 FUEL SYSTEM CONDITIONER



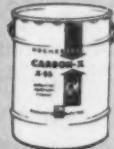
Clean and condition fuel systems of any car with this four-way tank additive. Priced for quick sales and profits.

SPECIAL OFFER



Ask your UMS Distributor about this valuable wrench set! Available only with your Rochester-GM Service Line order.

CARBON-X CHEMICALS



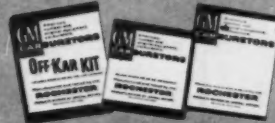
Researched, tested and recommended by America's number one carburetor manufacturer for any car or truck.

CARB-AIRATOR



Now let idle compensator fit all cars, cures stalling due to excessive under-bowl heat. Quickly, easily installed.

SERVICE KITS



Perform overhauls or quick carburetor cleanouts with these three: Master Kits, Off Kar Kits and Kleanout Kits.



America's
number one
original equipment
carburetors

ROCHESTER CARBURETORS

your customers will . . .

COME AND GET IT



wix®

**HI-FLO WIXITE
PREMIUM, DEPTH-TYPE
FULL FLOW OIL FILTER**

IT'S A WIX SPIN-ON FILTER

for
**FORDS and
CHRYSLERS**

PC-15

REPLACEMENT FOR —

**CHRYSLER
FAMILY CARS**

Chrysler • De Soto • Dodge
Imperial • Plymouth

**FORD
FAMILY CARS**

Comet • Continental • Edsel
Falcon • Ford • Lincoln
Mercury • Thunderbird

**AMERICAN
MOTORS**

Ambassador • Rambler V-8

Better be ready with this great, new Oil Filter development . . . many of your customers will be looking to you for it, to replace the millions of full flow SPIN-ON Filters on Ford family cars (1957 on) plus American Motors and Chrysler family vehicles (1958 on).

It's the sensationally new WIX Replacement Oil Filter that delivers 20% greater efficiency . . . now in high performance, *depth-type* construction for all the most modern full flow filtration systems! AND, it's a famous SPIN-ON, disposable type Oil Filter pioneered by WIX — contract supplier of original filter equipment to the Ford Motor Company.

Ask us about this great new Filter and the WIX-O-MATIC program for Dealers that will really put you into the filter business—profitably. WIX means business—for you!

WIX CORPORATION • GASTONIA, N.C.

In Canada: Wix Corporation Ltd., Toronto

In New Zealand: Wix Corporation New Zealand Ltd., Auckland



"Grey-Rock Brake Linings work for us"



"Understand? If we install cheap linings, sooner or later the customer's gonna be unhappy about his brakes. So he takes his business somewhere else. That's why we've gotta recommend and install only Grey-Rock Balanced Brake Linings. Then customers are always satisfied. They tell their friends . . . and we do more business. Get it?"

That's why thousands of dealers from coast to coast rely on Grey-Rock. They know Grey-Rock linings are specially engineered for every make and model car. This careful engineering assures *balanced* brake

action—safe, smooth, sure stops every time. Grey-Rock performance—preferred by top NASCAR* racing drivers—always results in satisfied customers and more business.

Sell and install Grey-Rock. Tie in with Grey-Rock's powerful national advertising program. Use the P-L-S® plan (Pull—Look—Show) to uncover more brake work and watch your profits increase. Grey-Rock Division of Raybestos-Manhattan, Inc., Manheim, Pa.

*National Association for Stock Car Auto Racing

Only Grey-Rock makes **BALANCED BRAKESet LININGS**

BALANCED BRAKESets • TRUCKSETS • BRAKE BLOCKS • VEE-LOK® CLUTCH FACINGS • AUTOMATIC TRANSMISSION PARTS

You Can't Buy a Better Brake Lining to Save Your ^{customer's} Life



Here's *NEWS* about Genuine Ford Parts!

They're Super Quality Parts!

Genuine Ford Parts are built to the highest
quality control standards in the world
... and your customers know it.

If you're building your business for the *future* use Genuine Ford Parts, the Super-Quality parts *always* available in volume at your Ford Dealer's.

Remember, millions of Ford car and truck owners know the long-lasting quality of the original equipment in their Fords.

These Ford owners, *your customers*, know Genuine Ford Parts *SAFEGUARD* their Fords to give them longer life, smoother performance, more economical operation.

Show your customers the familiar FoMoCo package. If they *see* that the replacement parts you've put in their cars are Genuine Ford Parts, they'll know you believe in *quality first* ... they'll know you're the man to take care of their car ... and their friends' cars!

Build your business soundly for the future. Build it with a powerful salesman who's ready and able to help. His magic name is *Ford*.

This Month's
**SPOT-LITE
SPECIAL**

- ✓ Mustang
- ✓ Universal body
- ✓ curved glass
- ✓ shock absorbers



At Supermarket Prices!

On your next parts order, check the *prices* of Genuine Ford Parts!

Compare what you *gain* and what you *pay*.

And don't forget those Supermarket prices include Supermarket stocks!

Your Ford Parts Dealer keeps *stock in depth* and he's backed by twenty-six huge parts depots, nationwide, that stand ready to speed-ship hard-to-find parts NOW.

For *long-range* profit, for better, faster service, for Super Quality at Supermarket prices see your Ford Dealer.



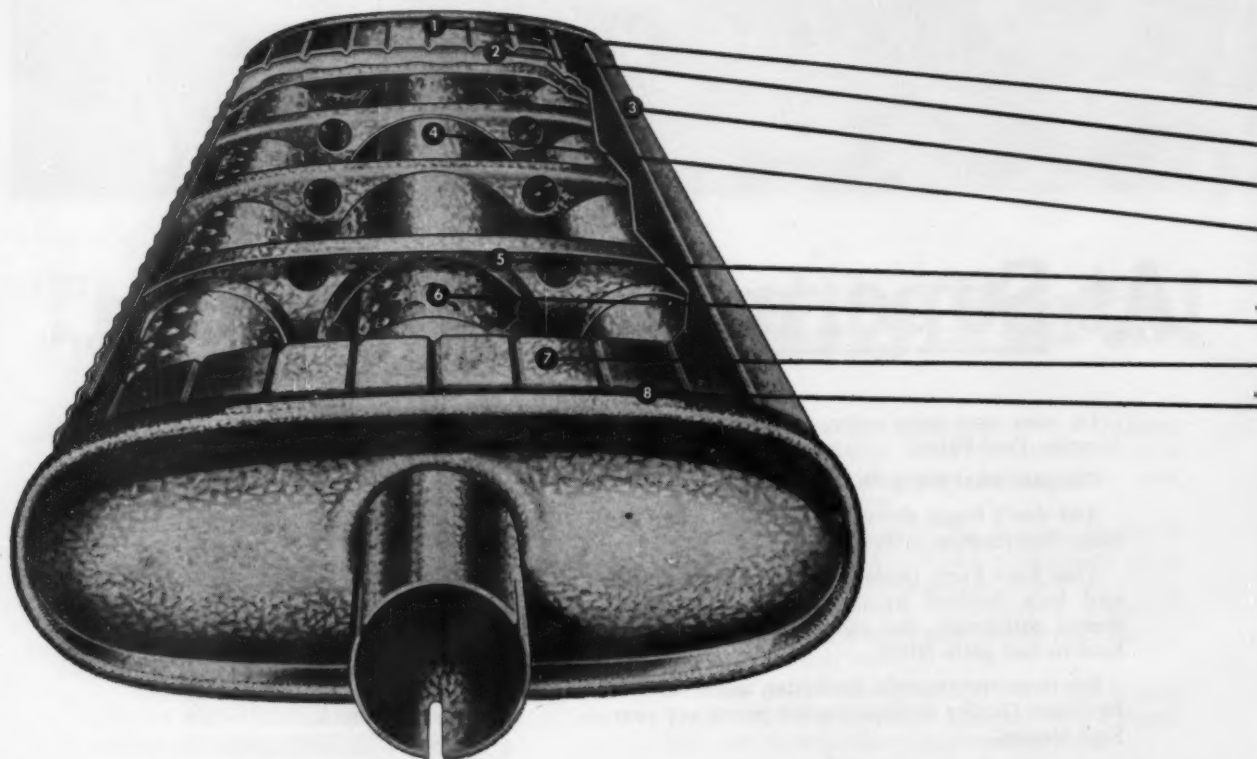
SUPER-QUALITY PARTS

SUPERMARKET PRICES

STOCKED IN DEPTH

AP Gives You More

Everyone knows that coated steel contributes substantially to longer muffler life—often as much as 20 to 30%. That's why many AP mufflers are coated throughout. And because it's in the shells that mufflers first show rust-out, all AP mufflers for cars from 1955 on—representing over 80% of total muffler sales—have coated outer shells.



Coated Steel Mufflers for Longer Life



But coated steel alone is not the answer. For example, here are 8 other important quality features you get in AP to insure a longer-lasting muffler:

- 1 Patented Air-Liner shell provides distinctive silencer
- 2 Full length, fully seamed asbestos liners deaden noise
- 3 AP gives you up to two-thirds thicker outer shells
- 4 Internal tubes average 46.8% greater length
- 5 Intermediate shells for full-range silencing
- 6 Exclusive AP "Dri-Flow" design for drier mufflers
- 7 More coated steel than in any other leading line
- 8 Extra rugged, double-locked crimped seams resist leakage

All these features, plus coated steel, are yours in AP—at no extra cost. We give them to you because they are needed to provide your customers with the longer-lasting mufflers they are demanding. Are you getting all these features in your present muffler line? The AP Parts Corporation, 3-N AP Building, Toledo 1, Ohio.

MORE FOR YOUR MONEY...
MORE MONEY FOR YOU



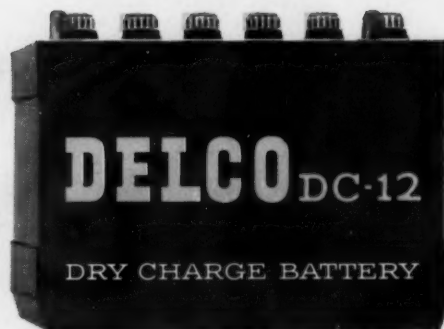
Your prospects are made aware of the AP name through 45,000 A-Boards, consistent advertising in LOOK, ARGOSY, TRUE, POPULAR MECHANICS, MECHANIX ILLUSTRATED and via Walter Cronkite over the entire CBS radio network.

with

AP

WORLD'S LARGEST MANUFACTURER OF REPLACEMENT MUFFLERS

FRESHIE'S STEERING 'EM YOUR WAY!



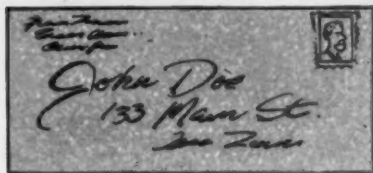
This perky little character is really spreading the word about Delco 100% Fresh Dry Charge Batteries. Your customers saw him in 1959 and will see him all through 1960 as the symbol of Delco DC. During January, February and March, for example, he will appear on the pages of Life, Look, Post, Argosy, True, Popular Mechanics, Mechanix Illustrated, and Popular Science. Freshie's on television, too, with the sparkling new Art Carney Show seen in millions of homes from coast to coast.

Delco's big, powerful advertising is national in effect—but, more important to you, the sales results are local. A large number of the 25,000,000 people who buy replacement batteries each year are presold on Delco. Thousands of these people may live in your town, hundreds in your neighborhood, many right in the block where you do business! You can help Freshie steer more of them your way by prominently displaying Delco Batteries, by using Delco point-of-purchase material, and by tying into the current Delco Sales Promotion.

QUALITY BUILT BY DELCO-REMY, FIRST IN AUTOMOTIVE ELECTRICAL EQUIPMENT . . . AVAILABLE EVERYWHERE THROUGH . . .



Letters



to the Editor

Mechanic Shortage

Dear Editor:

I am writing in regards to your paragraph in November issue of Newscoop, about shortage of mechanics.

From my beliefs there will continuously be a shortage until the wages go with the responsibility and knowledge of an experienced mechanic. . . .

A laborer in the mill considering his incentive over an eight-hour period receives \$2.00 more a day than we do for an 8½-hour day, with no insurance or benefits which are received in mills and other factories. They have no tools or knowledge or responsibility to the customer. . . .

I, myself, would not advise any young person to learn this trade.

George J. Krapp
Pittsburgh 5, Pa.

Good Shopkeeping

Dear Editor:

In reference to Good Shopkeeping which is featured in the December issue of Motor Age, may I take this opportunity to say that there is a keen need for your feature article. I am sure that it will be well "thumbed."

Mel Turner, Curriculum Director
Automotive Service Industry Assn.
Chicago, Ill.

Garagemen Recognition

Dear Editor:

We, of the Independent Garage Owners of America, Inc., sincerely thank the Chilton Company and you for your continued support of the Independent Garageman.

This means a great deal to us, of

course, and to independent garagemen everywhere, who are striving to elevate not only the mechanical and ethical standards of their trade, but to foster a wholesome working relationship among all segments of the Independent Automotive Industry.

Ralph H. James, Executive Director
Independent Garage Owners of America, Inc.
Tulsa 10, Oklahoma

Piston Ring Item

Dear Editor:

I am extremely pleased with the article on piston rings in your November issue. The layout is exceptionally good and I am certain that the article will create considerable interest amongst your readers.

On behalf of the Piston Ring Industry Promotion Committee, I would like to extend our sincere thanks for this very fine article.

C. H. "Chuck" LeFevre
Sales Manager
Sealed Power Corporation
Muskegon, Michigan



Safety Materials Sent

Dear Editor:

On behalf of the California Automobile Wholesalers Association, I wish to thank you for the splendid cooperation given us in sending photos and magazine articles which we can use in our Safety Clinic at the coming convention in Santa Barbara.

The Automotive Booster Club of California, together with the jobbing associations, have been campaigning for a long time to bring about automobile safety inspection on a statewide basis in California.

A. F. Parrish
Parrish & Justice Co.,
Los Angeles 11, Calif.

Highway Surveys

Dear Editor:

Two new state studies will soon be under way. At the request of state authorities, ASF will direct a full-scale highway needs survey in Missouri and a systems classification survey in South Dakota. Both will be completed by the fall of 1960.

The recent National Conference on School Transportation at the University of Kansas was designed to further improve bus construction standards, the efficiency and economy of school bus operations, and the selection and training of school bus drivers. The Conference was held by the National Commission on Safety Education, an ASF-grant organization.

J. O. Mattson, President
Automotive Safety Foundation
Washington 6, D. C.

YOU NEED CONFORMABILITY

IN PISTON RINGS...MORE THAN EVER BEFORE!

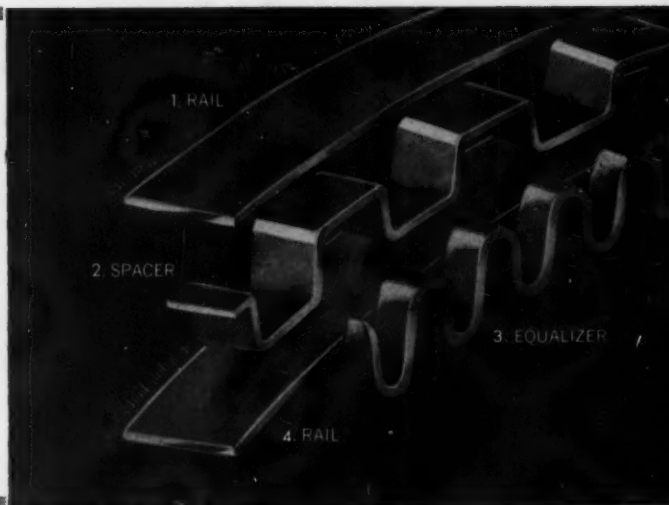
YOU GET CONFORMABILITY TO A GREATER DEGREE IN PEDRICK FORMFLEX CHROME OIL RINGS

ONE REASON IS

PEDRICK'S 4-PIECE DESIGN!

Pedrick's peripheral-abutment Formflex oil ring has an individual spacer and an individual "Equalizer", each of which is designed and constructed to work independently and to do its *own job* best!

Thus, Pedrick's 4-piece ring is as flexible and effective as possible, and the CONFORMABILITY which you get is unequalled.



DEPEND ON

Pedrick
FOR THE RIGHT RING JOB

In addition, PEDRICK FORMFLEX CHROME Oil Rings are:

- Easy to install!
- All-purpose—for any type of vehicle, for any kind of service!
- Chrome-faced for longer life!

WILKENING MANUFACTURING CO., Philadelphia 42, Pa. IN CANADA, Wilkening Manufacturing Co. (Canada) Ltd., Toronto 2

COMPLACENCY versus competitive SELLING



By LES A. THAYER
1st Vice President,
Automotive Service
Industry Association and
General Sales Manager,
Belden Mfg. Co.

Perhaps the greatest problem our industry faces today is corporate and individual complacency. This is perhaps more important than competitive encroachment. As an industry, we have over the years, met and overcome through service and attitude many difficult problems of a competitive nature. These problems seemed at the time to threaten our existence.

Yet because of the basic need for the distributor and his function in the pattern of marketing replace-

ment parts, we have survived every encroachment. We have emerged from each apparent crisis with stronger sales muscles, more solid stature and with greater benefits to ourselves and those we serve.

Much Greater Strength

Many problems facing our industry today are certainly no less dangerous to our existence than the problems of the earlier days. However, due to the repetitiveness of such threats we have much greater strength. This strength has grown through the meeting and mastering of past problems.

Still, the problem of complacency—that of growing soft—is unquestionably one of the most serious problems we face today. It is far more difficult to deal with than the current competitive threats to our industry. By the use of the muscles we have developed over the years of competitive selling we can suc-

“By the use of muscles we have developed over the years of competitive selling we can meet any threat . . .”

cessfully meet any threat. But we must be willing to exert the same effort as in the early, struggling days.

We cannot weaken our efforts to meet competitive problems headlong. For us to believe the “legislation” or “policy” will provide a fence of protection about us and our “rights” is pure complacency. It is a softening of stature; it can only lead to oblivion.

Man Who Serves Best

The business of serving the ravenous appetites of almost 70 million vehicles can never be considered the “right” or “privilege” of name or size, but the business of the man who serves best. Getting parts or service to the point of need at the right time, in the right attitude, will continue to justify the existence of the independent parts distributor. If he continues his fight he will continue to grow and prosper.

Machine shop helps build **AUTO PARTS** volume



Front view of Tigua Auto Parts.

*Special services are
available to mechanic
and shop customers at
Texas auto parts firm*

FOUR years ago, Hector Aguirre and O. C. Higgins had \$3,000 between them and a desire to get into the jobbing business.

"With the \$3,000," said Aguirre, "we opened up the Tigua Auto Parts. When financially able, we took over an adjoining building. We made it into our machine shop, buying the equipment as we were able to pay cash for it. In the meantime, we have built our parts inventory up to \$30,000. Our inventory turn-



Hector Aguirre (right) checks the overhead before mechanic starts grinding of crankshaft.

Picture at right shows mechanic in pit making final adjustments.



over is 5 times a year."

This organization consists of 10 men, including the machinists. During peaks, as many as five counter men are available to get the customers served and on their way.

Steam Cleaning Service

"We use our steam cleaner in conjunction with our machine shop. Extending this service to our customers without charge is greatly appreciated," said Aguirre.

One of the major services offered is crankshaft grinding in the block.

"We never drop below doing at least three of these jobs a day," Aguirre continued. "And we have done as many as seven. Turning out five a day is not at all unusual. Straight across the board, it takes one mechanic working single-handed one hour to complete one of these jobs."

These jobs are done exclusively for garages and service stations. Should a customer throw a rod,

their mechanic dismantles it, calls Tigua Auto Parts. Tigua comes for it with a wrecker and delivers it back to the garageman to take it from there.

"We charge a flat \$11.50 for the first throw and \$5.50 for each subsequent throw. It's seldom that we ever have more than 2 throws to do. About half the jobs involve only 1 throw. While one mechanic is doing the crankshaft work, another mechanic is fitting the new rod (or rods) to the piston."



INDUSTRY MEETINGS

Jan. 21-23—The Automotive Electric Association regional conference, Atlanta Biltmore, Atlanta, Ga.

Jan. 24-28—International Foreign and Sports Car Show Dinner, Key Auditorium, Miami, Fla.

Jan. 30-Feb. 3—National Automobile Dealers Assn., Washington, D.C.

Feb. 7-8—Automotive Boosters Clubs International executive council and board of governors meetings, Park-Sheraton Hotel, New York City.

Feb. 7-9—Automotive Affiliated Representatives officers, board of directors and general membership meetings, Manhattan Hotel, New York City.

Feb. 8-9—Automotive Service Industry Assn. Convention, Carnegie Hall, New York City, N.Y.

Feb. 9—Motor & Equipment Manufacturers Association President's Reception, Hotel Savoy Hilton, New York City.

Feb. 10—Automotive Booster Clubs International banquet, Astor Hotel, New York City.

Feb. 10-13—International Automotive Service Industries Show, Coliseum, New York City, N.Y.

Feb. 17-22—10th Anniversary Show, "Aurora"; Conn. State Armory, Hartford, Conn.

Mar. 10-13—Pacific Automotive Show, City Auditorium, Denver, Colo.

Mar. 12-13—Ohio Automotive Wholesalers Assn. convention, Southern Hotel, Columbus, Ohio.

Mar. 24-27—Southwest Automotive Show, Automobile Bldg., State Fair Park, Dallas, Tex.

Bickel Elected President of AEA

Joseph E. Bickel, Vice President in Charge of Merchandising of Monroe Auto Equipment Co., assumed the duties of president of the Automotive Electric Association on January 12. He succeeds Gene P. Robers of Carter Carburetor Div., ACF Industries, Inc.

Bickel (photo below) was



elected president of AEA at the association's recent national convention in Chicago.

In the field of marketing and merchandising, Mr. Bickel has made numerous contributions to his company and to the industry.

Apr. 23—Automotive Wholesalers of Okla., annual convention, Skirvin Hotel, Oklahoma City, Okla.

May 1-3—Michigan Automotive Wholesalers Assn., annual convention, Pantlind Hotel, Grand Rapids, Mich.

May 8-13—ASIA management institute, University of Illinois, Champaign.

May 20-22—New Jersey Automotive Jobbers Assn., convention, Colony Motel, Atlantic City, N.J.

May 22-27—ASIA sales management institute, Syracuse (N.Y.) University.

NEWSETTES

A-C-H Tune-up Program Announced

Electric Autolite Co., Carter Carburetor Division of ACF Industries, Inc., and Holley Carburetor Co. recently announced a new joint automotive tune-up program to more than 80 central distributors.

Called the A-C-H (Autolite-Carter-Holley) Tune-up Program, it will make available to independent repair shops and service stations electrical and fuel system replacement parts through a combined catalog. Catalog is supplemented with a single price list, containing part numbers and prices for all three manufacturers.

A basic part of the A-C-H plan is a cabinet designed to hold stocks of Autolite, Carter and Holley tune-up parts for both fuel systems and electrical systems. The program recommends dealer stocking of only the fast moving parts for the most popular domestic cars and light trucks.

Slower moving items are available from the local service distributor, who also is responsible for keeping independent repair shops and service stations abreast of current technical developments, new parts and price changes.

Lepene Joins AWDA Membership Committee

Thomas S. Perry, President of Automotive Warehouse Distributors Assn., has announced the appointment of Walter S. Lepene, general sales manager of Doan Manufacturing Co., Cleveland as a manufacturer member of the AWDA Membership Committee for 1960.

W. E. Lahr, Jr. of Welco Warehouse, Minneapolis, Minn., is chairman of the committee. The other members are Leonard Tapp, Jobbers Supply Company, Kansas City, Mo. Leonard Bilyeu, Automotive Engineering Company, St. Louis, Mo.; and Murray Ferber, Precision Automotive Components, St. Louis.

Carter Factory School

The Carter Carburetor Factory Service School, which has taught and trained auto mechanics in carburetor and fuel system trouble diagnosis since 1934, is moving into new quarters. Carter Carburetor, a division of ACF Industries, Incorporated, stated that the new school facility is designed to be one of the auto industry's most complete fuel systems instruction center.

The air-conditioned classrooms, located at Carter's main plant in St. Louis, are equipped with a full assortment of training equipment.

An innovation at the Carter school, under the directorship of Roy Dean, is the course in customer relations. This will include service sales techniques and efficient shop practices.

Snap-on Acquires Judson Engineering

The Snap-on Tools Corporation of Kenosha, Wis., has announced the acquisition of the outstanding common stock of Judson Engineering Corporation, Natick, Mass. Purchase of Judson, a manufacturer of automotive wheel balancing and aligning equipment, was achieved by the exchange of Snap-on common stock for the outstanding common stock of Judson.

Judson will retain its corporate identity with operations under the direction of R. D. La Penta, chief executive since 1950.

Howard R. Zeuschel

Howard R. Zeuschel, one of MOTOR AGE's regional managers in the Chicago area, died Dec. 31, 1959. He had been hospitalized as a result of burns suffered when he fell asleep while smoking in his home.

Mr. Zeuschel had been associated with MOTOR AGE for two years. He was laid to rest Jan. 4 in his native St. Louis.



JOBBER IN WASHINGTON: Witnesses before the House Small Business Sub-Committee (standing L. to R.) G. C. Morris, executive secretary, Automotive Wholesalers of Texas; Jack E. Klann, Klann Electric, Inc., Detroit; Sylvan J. Mack, M & L Motor Supply Co., St. Paul; Don Phillips, Paul Automotive, Inc., Lansing, Mich.; Morton Zakrin, Brooklyn Automotive Warehouse, Inc., Richmond Hill, L.I.; Charles Rodefelf, Rodefelf Co., Inc., Richmond, Ind.; Robert E. Phelps, Phelps-Roberts Corp., Washington, D.C.; Tom Payne, Jr., Automotive Wholesalers of Oklahoma, Okmulgee, Okla.; J. B. Stradley, Jr., Florida Automotive Wholesalers, Titusville, Fla.; Fred E. Blank, Ocean City, N.J.; not present, Leonard Weinstein, Charles Friedman Co., Inc., Bridgeport, Conn.; Emory Young, Motor Car Supply Co., Charlestown, W. Va.; Seated, ASIA Legal Counsel, Harold T. Halfpenny; ASIA president, Victor L. Toft; ASIA Washington Legal Counsel, J. Austin Latimer; Richard Melvin, administrative assistant to J. L. Wiggins, executive secretary, ASIA Wholesalers Division. Two days of hearings were devoted almost entirely to testimony by ASIA members who spoke about coercive practices in the oil industry.

AWDA to Sponsor Jobber Adv. Drive

A public relations campaign on behalf of the automotive wholesaler is in the making. It will be sponsored by the Automotive Warehouse Distributors Assn.

Martin Fromm, executive secretary of AWDA has made known that the advertising program will appear in dealer trade magazines. The objective of the campaign is to call attention to the many services rendered by the automotive wholesalers.

"70 Million Cars and Trucks Need Service in a Hurry," reads one headline. The ad then points out "A mighty challenge being met by Automotive Wholesalers Cooperating with Service Shops."

Reprints of the advertisement are being prepared for AWDA members so that they can alert their wholesaler customers on what

is being done. Reprints in turn will be sold to their jobbers for direct mailings to their retail customers.



John E. Echlin (left), president of Echlin Mfg. Co., and Leonard N. Fisher, president of United Parts Mfg. Co., announced details of the merger of Echlin and United at recent NAPA Chicago meeting.

Youngest Delegate

A. B. Coffman Associates of Chicago, Show Managers for the 1960 International Automotive Service Industries Show, February 10-13 at the Coliseum in New York City, have received an application for credentials for Earl Vinson, Jr., aged 11, co-owner of Earl Vinson Auto Parts, 315 E. Second Street, Santa Ana, California. The Vinsons' senior and junior, will be arriving at New York via jet plane.

If this does not establish a record for the youngest accredited delegate ever to attend an I.A.S.I. Show, it should at least set a record for a son following — swiftly — in his father's footsteps!

Earl Vinson, Sr., owner-manager of the company, has been attending the shows for the past 25 years. His ambitious young son works at the store after school and on Saturdays.

Young Executives Forum Essay Contest Winners

Howard A. McMurchie, secretary of ASIA's Young Executives Forum, has announced the co-winners of the Forum's recent essay contest. Theme for the contest was "The MAN in MANagement."

John G. Irwin, sales promotion manager for Kentucky Ignition Co. in Lexington, and Robert W. Kraud, assistant to the president of Bar's Products Supply, Inc. of Holly, Mich., were the co-winners. Both essays will be presented at the 3rd general session of the forthcoming ASIA Convention in February.

Acting as judges for the Forum contest were Frank P. Tighe, editor of MOTOR AGE, and Edward Ford, editor of MOTOR.

McMurchie also announced that the first annual Meeting and Reception of ASIA Young Executives will be held at 5 P.M., Feb. 9 in New York's Plaza Hotel.

IASI Show Set for Feb. 10-13

Among the hundreds of new automotive service products that will be shown and demonstrated at the 1960 I.A.S.I. Show, there may be one or two that will spark an idea for an entirely new type of horseless carriage. The Show takes place at the New York City Coliseum. Dates will be Feb. 10-13.

Ideas built the automotive service industry, the successful wholesale and jobbing businesses, the successful service stations, garages, repair shops and fleets. Ideas built the 1960 I.A.S.I. Show.

Four floors at the Coliseum will be filled with nearly 500 "idea spots"—containing all the latest and

newest in parts, accessories, tools, chemicals, paints and supplies. All are designed to save time and bring in more profit. Brand new service techniques will be demonstrated.

It's a selling show, out to make record history. Manufacturers will supply facts and figures on the dealer-to-car-owner level, showing what profit can be made on new items and how they can be sold. Merchandising and advertising aids will be ready for retail service personnel to put to immediate use, and for jobbers from distant parts to take back in a package to their retail customers.

ASIA CONVENTION SPEAKERS*

Feb. 8-9, 1960

New York City

Carnegie Hall

"TEAM PROGRESS FOR SIXTY"

J. H. Mehan, Manager of Distributors Institute, Chicago, Ill.

"MOBILITY—THE WAY OF FREE MEN"

Admiral Arleigh A. Burke, U.S. Chief of Naval Operations.

"LEGALLY SPEAKING"

Harold T. Halfpenny and George Howell, A.S.I.A. legal Counsels of A.S.I.A. Manufacturers and Wholesalers Division, respectively.

"STANDING ON THE THRESHOLD OF GREATNESS"

Charles E. Cullen, Charlotte, N.C.

"1960 I.A.S.I. SHOW"

Charles S. Rogers, Chairman of Joint Operating Committee of Automotive Service Industries Show.

*Available list of speakers as issue went to press.

"WHITHER THE WHOLESALER"

Charles Roazen, Hunt-Marquardt, Inc., Boston, Mass.

"A DIRECT LOOK AT REDISTRIBUTION"

Charles H. Davis, Executive Editor, Jobber Product News.

"HOW TURNOVER AFFECTS YOUR BANK ACCOUNT"

Morrill Palmer, Trackman Auto Supply Co., Joliet, Ill.

"STATE ASSOCIATIONS—VITAL ASSET TO AUTOMOTIVE SERVICE INDUSTRY'S PROGRESS"

Tom Payne, Executive Secretary, Oklahoma Automotive Wholesalers Association.

"OIL COMPANIES POLICIES"

Representative James Roosevelt (California).

CLOSED

LINCOLN'S BIRTHDAY

We've gone to the

INTERNATIONAL AUTOMOTIVE SERVICE INDUSTRIES SHOW...

*To get the dope on
New Parts • Accessories • Tools
Equipment • Chemicals
Servicing Methods...*

WE'LL SERVE YOU EVEN
BETTER WHEN WE GET BACK!

INTERNATIONAL A.S.I. SHOW
FEBRUARY 10-13, 1960



Motor Age's

WHO'S WHO



Henry S. Richard, photo, has been appointed director of racing for The Firestone Tire & Rubber Company. **William R. McCrary** has been promoted to general sales manager of race tires and **Clark E. Stair** has been named manager of race tire development for the company.

Theodore R. Jones, formerly assistant advertising and sales promotion manager has been named manager of advertising at Arvin Industries, Inc.

William Duncan has been appointed sales manager, Original Equipment Manufacturers, Automotive Division of The Electric Storage Battery Co.



Kenneth W. Sward has been appointed executive assistant to the executive vice-president and general manager of Weaver Manufacturing Co., a division of Dura Corporation. He formerly was vice-president and director of engineering of Dura Corporation.



Wagner Electric Corporation has changed the name of its "Automotive Parts Division" to "Parts and Accessories Division." It appointed **Forrester G. Wilson**, photo, as general manager of this division and **Gotha W. Hill** as sales manager.

William F. Coulter has been named to the newly created position of vice president in charge of automotive and marine sales for Rubbermaid Incorporated.

Darrell H. Kay has been named automotive divisional sales manager for the Los Angeles division of Behr-Manning Co.



Frank J. Ehringer, photo, has been elected vice president and general manager of the automotive products division of Tung-Sol Electric Inc. **Burton R. Lester**, left, has been elected to the newly created post of vice president and general manager of the semiconductor division.



Dr. R. Burton Power, Jr. has been elected vice president for engineering.

Ted A. Rohlfen has been appointed south pacific coast division manager of Oakite Products, Inc.

M. I. Sheely has been appointed manager of the Chicago District for Dayton Rubber Company's replacement tire sales.

Edward D. James has been named regional manager of the newly combined Philadelphia and metropolitan New York sales territories of the Wilton Tool Manufacturing Co., Inc.

Walter B. Harris has been appointed territorial manager for the Martin-Senour paint company's automotive division.

Charles R. Spencer was named field sales manager of the Denver-based Gates Rubber Company.

Henry A. Tobey has been elected vice president in charge of manufacturing of the Bearing and Rock Bit Division of The Timken Roller Bearing Co.

Robert J. Barrus has been appointed advertising manager for Jefferson Chemical Company, Inc.

Larry Datema has been appointed sales manager in charge of the automotive sales division of the Shatterproof Glass Corporation.



Paul G. Glasmeier has been appointed assistant sales manager assigned to national accounts for Big Four Industries, Inc. He will specialize in work with the major tire and petroleum marketers, analyzing their tire service requirements.



E. M. deWindt was elected vice president and director of sales of Eaton Manufacturing Company. He was formerly assistant director of sales of the corporation. He assumed his new responsibilities January 1.



Leonard M. Cohen, photo, has been appointed treasurer of Wilkman Manufacturing Co., succeeding **Henry E. Gerstley**, who is chairman of the board. Cohen had been assistant treasurer for the past six years and will still retain the post of assistant secretary.



As a Matter of Fact

Nobody Ever Went Broke Making A Profit

THE objective of this, the 14th Annual Automotive Service Ideas issue (and every issue of MOTOR AGE) is to help you to make money.

Certainly it isn't evil, sinful or illegal to make an honest profit. The public knows all too well that "you don't get somethin' for nothin'."

Diagnosis of automotive ills, their cause and cure is your stock in trade. Such talents are valuable and worth money. If you get a belly-ache you call on your doctor. He'll fix you up with a high-priced prescription and then send you a bill. What's more your mighty grateful to him for making you well.

Give-away programs are currently being frowned upon. If you're going to give the shirt off your back at least ask for the price of the shirt. Nobody ever went broke making a profit.

Study the following pages of MOTOR AGE and plan your way to a profitable 1960.

Optimism Rides Again

We have been privileged to read dozens of year end statements and forecasts. Each is as optimistic as a small boy set free in a candy store.

In offering the car-buying public what it wants, the automobile makers feel that the compact cars will boost the national economy.

Detroit hopes to do this by increasing production and thus, consumption of goods. The compacts will thrive in an expanded market rather than a "substitute" market, officials say.

For the buying public this means a realignment of buying choices. Smaller car, low and medium price cars and luxury cars. The broader choice being offered includes twenty-two different makes, fifty-six chassis models and well over three hundred body styles.

The good news is that 7 million cars will be built and sold in 1960. This includes some 700,000 American made compact or "Junior" cars (as Dave Reese calls them elsewhere in this issue) and about 500,000 imports. Added to that will be 1.4 million trucks.

As we proceed through 1960 vehicle population in the U.S. will climb over 70 million and approach the vicinity of 75 million.

National Auto Show

Next October will see a bright new event in Detroit . . . the National Automobile Show in the mammoth, new Corbo Hall, in Detroit's expanding civic center. The Automobile Manufacturers Assn. will sponsor it.

Faithfully yours,

Frank P. Tighe

newscoop

*Lifting Small Cars
AMC and S-P Jubilant
Car Sales Forecast
Dodge's New "Warrior"
Prices On Ford Comet
Serviceman's Problems
Ford Leads Chevy In '59*

In the days ahead HERE'S WHAT TO LOOK FOR !!!

(Items gathered and edited by Ed Janicki, and Bill Montgomery)

Use Care When Lifting New Compacts

CAR COMPANIES ARE CAUTIONING GARAGES and service stations to use extreme care when lifting new compact cars.... Hoist lifting pads should contact structural members (box side rails) of underbody at definite points, advises George Cutler, service director of the Plymouth-De Soto-Valiant Division.

Possible damage to front suspension or other body components could result if pad position is not within these limits.... When using a floor jack, it should be placed only under rear axle housing or front suspension lower control arms.... Never use jack on any part of underbody.

AMC And S-P Had Good Year



THERE WEREN'T TOO MANY RECORDS SET last year.... However, 1959 turned out to be a jubilant year for at least two companies, which only four years ago were blotting out red ink as other car makers were reaching new heights.... From a \$6.9 million loss in 1955 to a \$60 million-plus profit last year! That's the record that speaks for American Motors.... It was also a historic year for Studebaker-Packard, with earnings topping \$20 million.... Back in '55 company was \$30 million in red.

Last year, both companies turned out a combined 550,000 cars compared with 274,000 units in bleak 1955.

Watch Your Cash!

MANAGE YOUR CASH CAREFULLY, small businessmen are advised.... You can't pay your creditors with accounts receivable, nor with inventory, Small Business Administration stresses.... You must have money to meet your commitments.

Car Sales Should Boom In '60

RETAIL CAR SALES SHOULD BOOM in 1960, U.S. government officials say.... Consumer demand will be particularly strong this year because: Strike last year cut production and sales and created some delivery shortages.... Replacement demand will continue high, and scrappage will hit 4 million.... Further expansion of suburban living and new highways will stimulate new demand.

Dodge's New Compact Dubbed Warrior

DODGE'S UPCOMING COMPACT CAR scheduled to bow in spring.... Will be dubbed the Warrior.... Originally scheduled as 1961 model, Warrior will be akin to Valiant.... It'll use same basic body shell and engine.... Styling individuality will be accomplished by the use of different quarter panels and grille.... Car will be slightly longer than Valiant.

New "Baby" For Cadillac?



ALL THIS TALK ABOUT CAR SIZES HAS PROMPTED Cadillac to take a look at its measurements.... Division feels it is neglecting a certain segment of customers who may want a shorter car.... At present Cadillac offers only one wheelbase.

Cadillac stylists are now studying these possibilities.... (1) a second standard sedan, built on a shorter wheelbase.... (2) a completely new sporty job which would compete with the Thunderbird.... Officials have been taking frequent trips to Italy to get some ideas.... Don't be surprised if you see a new "baby" in the Cadillac family this year.

Prices On Ford's Comet

FORD'S SECOND COMPACT CAR, the Comet, will be offered in two-door, four-door and station wagon body styles.... Suggested list prices will start at about \$1850, or roughly \$100 more than Falcon.... Reports that Comet will have front-wheel drive are false.

Detroit Forecasts Decline of Imports



IMPORTS ARE BEGINNING TO FEEL PINCH.... Despite steel shortages, U.S. small cars are overtaking their foreign cousins.... Foreign cars had lead in registrations for the first nine months.... However, picture changed with entry of Corvair, Falcon and Valiant.... Through September, imports had a margin of nearly 82,000 units.... At the end of November, the five U.S. compacts outsold their foreign mates by more than 800 units.

Sales of imported cars may still hit the expected 600,000 mark for 1959.... After that? A decline, if Detroit forecasts are correct.... Some say down to about 500,000.... Further competition will come from Ford's Comet, Dodge's Warrior, plus a litter of new ones from GM later in year.

Drive Against Reckless Drivers Urged

NATION'S TOP G-MAN, J. EDGAR HOOVER, head of FBI, is urging everyone to join fight for highway safety.... Hoover has called on all local law officers to launch a "tough, unapologetic campaign" against careless, reckless, and tipsy drivers.... He points out that in money alone, traffic accidents cost nation more than \$5,500,000,000.... He urges that police and courts drop their normal "good will" toward mankind in dealing with traffic offenders.

Car Manufacturers Interested In Serviceman's Problems

CAR COMPANIES ARE SPARING NO EFFORTS in attempts to upgrade caliber of service which dealers are giving customers.... Upper-bracket management is now stepping into picture.... Taking a more active interest in serviceman's problems.

An example: field service reps from one factory recently were surprised at covey of brass present at regional meeting.... Among those who turned out to hear their problems were several corporation vice presidents and a divisional sales manager! What does this mean? Sums up one service official: "Top management is so concerned with the quality of service that it is now paying just as much attention to service personnel and their headaches as it is to the sales department."

Push For Higher Minimum Wage

PRESSURE ON CONGRESS to raise retail wages will be strong in 1960... Push for a higher minimum wage will include bid to extend federal wage law to businesses not now covered.

Sen. Hugh Scott, R., Pa., believes campaign might be successful, in part.... An increase in either the amount or coverage of minimum wage law is likely, he predicts.

Trend To More Unitized Body Construction

AUTO PRODUCERS ARE GOING TO CONTINUE shifting rapidly to unitized body construction, and will use more and more aluminum, government predicts.... Average use of aluminum in 1955 per car was under 30 pounds... Average by 1959 hit 52 pounds.... Use will spread to more engines, mufflers, bumpers, by 1961 model year, including perhaps new aluminum alternators to replace conventional generators.

Tax Relief For Small Firms?

SMALL FIRMS STAND A GOOD CHANCE of getting some tax relief in 1960.... Government financial problems make a broad tax-cut almost out of the question—but election year voting by campaigning politicians may well provide some relief for small firms.... Possibilities include tax breaks for self-employed retirement funds, easier inheritance taxes, and deductions for profits reinvested in a firm.

Ford Leads Chevy First 11 Months of '59

FORD WAS LEADING CHEVROLET by 66,000 units in production for first 11 months of 1959.... Race would have been closer if not for steel strike.

Ford, which produces half of its own steel, has kept on turning out cars uninterrupted.... On other hand, steel strike pinched Chevrolet hard.... Division turned out only 8900 cars in November compared with Ford's 117,000.... It's not a valid comparison, however, since Chevrolet plants were completely dry of steel.... Division was forced to shut down all plants during last two weeks of November and part of December.

As a result of steel shortage, industry output during last quarter of 1959 dropped to lowest level in eight years.... Year's total production, however, was expected to hit 5-1/2 million mark, about 30 per cent better than 1958.... Look for a strong recovery in first quarter.... Some observers estimate output will hit an all time high of more than 2.1 million units during the three months.



The Highways we pay for **AND DON'T GET**

A motorist pulls up alongside the gasoline pumps. "Fill it up," he tells the attendant. An even 15 gallons pours into the tank. The motorist pays for the gas and drives away.

Probably he knows that he has just paid 7¢ per gallon of gas to his state government. He knows, too, that he has kicked in 4¢ per gallon to the government in Washington. That makes \$1.65 in taxes on the purchase he just made.

Maybe he believes the \$1.65 is to be spent for better roads that will make travel easier

Continued on page 38

The diversion of some of our highway taxes reduces monies available for constructing modern roadways

By Frank P. Tighe, Editor

The HIGHWAYS.

CONTINUED



and safer for him and for his family. In part, he's right. Some of the money he and other drivers are paying in gasoline and other highway taxes does end up in new-roads outlays.

Not all of it, though.

A very large chunk of these tax revenues falls victim to what students of highway financing call "diversion." This means that the detouring of highway tax receipts into general government funds or into programs not related to better roads.

Many state governments and the government in Washington are allowing this detouring to go on.

Take New York State, for example. The state, in 1958, took in \$282.5 million in motor fuel taxes and other highway-use taxes. It invested \$200 million in state highway activities. At least \$59 million more went for local roads and streets.

In that same year New York shunted almost \$6 million into its general fund, the U.S. Bureau of Public Roads reports. Once there, it could have been spent for highway improvements. Or it could have gone for a number of roads.

Have a look at Florida. The state's receipts from taxes on users of highways in 1958 came to \$163 million. It paid out \$99.4 million for state highway work, including police and safety programs. Another \$13.7 million was put into streets and local roads.

But \$45 million became sidetracked. Two-thirds of this amount went into the state general fund. Education, nonhighway debt, and miscellaneous projects claimed another \$13 million. County and other general funds were given \$22,000.

Its 1958 record makes California appear the biggest tax-diverter of the states. It gathered up \$547 million in receipts from various automotive and highway taxes. The state put \$88 million into county and other local general funds. As California sees it, though, this isn't tax-detouring.

Part of its highway taxes are "in lieu" taxes, the state says. That is, they are collected instead of personal property taxes formerly placed on vehicles. For this reason, California sees no objection to steering such taxes away from specific roadbuilding programs.

A Costly Practice

Finding other ways to spend revenues from such sources as fees for inspection, registration charges, and gas taxes is nothing new. More than half the states have followed this practice for years. From the standpoint of roadbuilding needs, though, it's a costly practice.

This guiding of highway taxes elsewhere has cut into funds for bringing highways up to modern standards. It has resulted in nothing less than the loss of mileage seriously needed to take care of present and future heavy traffic loads.

How much mileage has been lost to the states because of this side-tracking of tax money? A good estimate, just for the years 1934-1956, is 142,000 miles. This is based on the miles that could have been built in the states at average costs in the years the taxes were funneled off.

Here, then, is one excellent reason why there's trouble when the automotive tax monies are spent on non-highway projects:

Continued on page 102

Compiled for calendar year
from reports of State authorities

DISPOSITION OF RECEIPTS FROM STATE IMPOSTS ON HIGHWAY USERS — 1958

U. S. Dept. of Commerce
Bureau of Public Roads

(IN THOUSANDS OF DOLLARS)

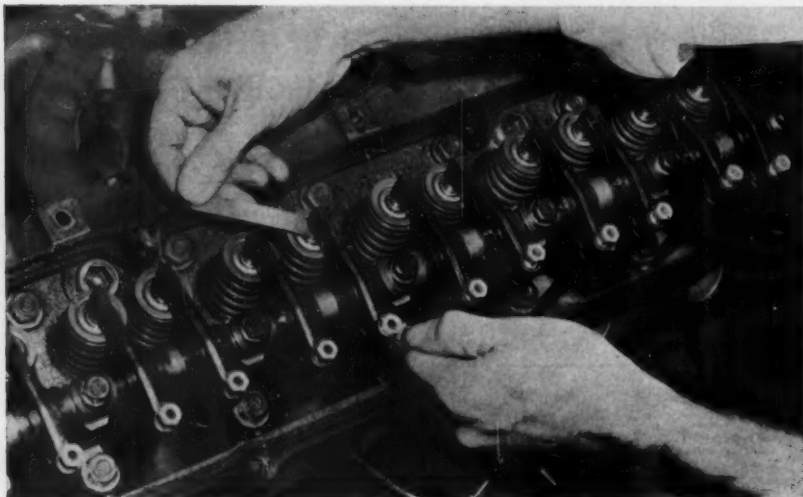
State	Net Total Receipts of Calendar Years*	Net Funds Distributed			
		Total**	For State Highway Purposes	For Local Roads and Streets†	For Nonhighway Purposes
Alabama	77,136	74,571	36,767	37,783	21
Arizona	33,864	31,340	24,691	6,649	—
Arkansas	50,149	49,594	37,255	10,547	1,792
California	547,313	515,530	300,745	126,669	188,116
Colorado	51,106	48,145	31,684	15,086	1,375
Connecticut	60,699	57,721	47,442	10,279	—
Delaware	12,711	12,154	11,187	—	967
Florida	163,360	158,716	99,484	13,770	45,462
Georgia	93,631	91,261	58,466	28,040	4,755
Idaho	23,884	23,186	16,226	6,960	—
Illinois	233,121	226,185	122,799	101,759	1,627
Indiana	133,582	126,368	67,863	57,468	1,037
Iowa	101,144	98,570	51,422	47,148	—
Kansas	58,421	55,569	43,534	11,571	464
Kentucky	77,899	75,852	69,088	6,764	—
Louisiana	73,310	70,381	55,765	14,616	—
Maine	31,185	29,653	27,032	2,621	—
Maryland	77,253	74,036	44,372	29,664	—
Massachusetts	90,446	86,937	71,949	14,684	304
Michigan	204,937	197,458	98,747	98,711	—
Minnesota	94,480	90,287	55,348	33,632	1,307
Mississippi	54,101	52,491	27,002	24,831	658
Missouri	79,802	76,913	76,702	211	—
Montana	24,093	22,974	19,362	3,612	—
Nebraska	48,171	46,995	27,075	19,920	—
Nevada	11,848	11,507	9,571	1,936	—
New Hampshire	17,844	17,364	16,097	1,267	—
New Jersey	145,342	132,804	89,429	17,265	26,110
New Mexico	33,199	31,970	25,902	3,976	2,092
New York	282,552	265,581	200,285	59,331	5,965
North Carolina	128,509	124,050	113,754	6,478	3,818
North Dakota	20,821	20,952	14,807	6,024	121
Ohio	239,770	234,221	120,529	113,692	—
Oklahoma	90,067	88,448	39,553	30,345	18,550
Oregon	62,770	59,236	39,825	18,243	1,168
Pennsylvania	235,815	229,218	181,426	47,618	174
Rhode Island	18,701	17,823	11,833	504	5,486
South Carolina	57,180	55,466	44,812	6,461	4,193
South Dakota	23,689	23,789	17,598	6,191	—
Tennessee	99,334	97,741	48,315	44,421	5,005
Texas	296,611	286,879	201,854	33,414	51,611
Utah	24,396	23,476	20,636	2,734	106
Vermont	14,871	14,538	8,908	5,630	—
Virginia	95,442	89,577	81,790	7,787	—
Washington	98,008	94,582	47,773	28,016	18,793
West Virginia	47,936	46,564	46,564	—	—
Wisconsin	108,559	103,679	55,707	41,900	6,272
Wyoming	14,542	13,636	10,022	3,614	—
Dist. of Col.	20,320	19,444	—	13,467	5,977
Total	4,684,024	4,495,632	2,968,997	1,223,309	303,326

* This table summarizes the receipts from motor-fuel taxes, and from motor-vehicle fees and special imposts on motor carriers.

† Includes direct expenditures by States on local roads and streets as well as fund transfers. In many States, funds transferred under "county and other local roads" may ultimately have been used in part for city streets or service of obligations for local roads. Funds allotted for city streets forming urban extensions of State highway systems are included in allotments for State highway purposes.

‡ The nonhighway allocations of "vehicle license fees" in California and "motor-vehicle excise taxes" in Washington, and registration fees in Wisconsin were in lieu of personal property taxes formerly imposed on motor vehicles.

** Does not include costs for collection and administration of highway-user revenues.



Conventional method of adjusting valve clearance is demonstrated in the photograph above.

Servicing the Chrysler VALIANT

*Presenting some service pointers about this
bright new star on the Compact Car horizon*

THIS new Chrysler built compact car is easy to service. It features torsion bar suspension, the same type used on all Chrysler products, and a new light weight automatic transmission. The transmission functions the same as the torque flight, but all the parts are smaller in size and lighter.

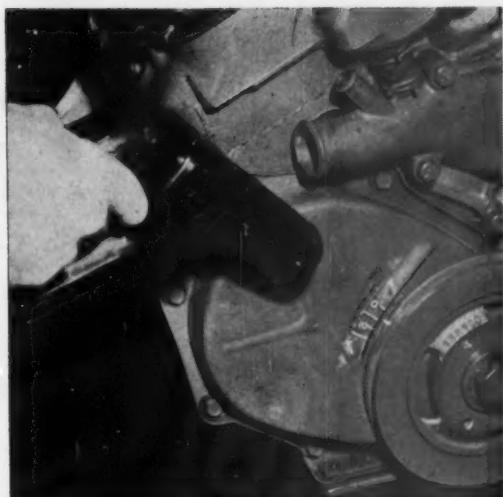
Another feature is the generating system. A new Chrysler built alternator supplies the electrical power. This new alternator supplies more current at low engine speeds, when the car's heater, lights, and other accessories are in use.

By J. K. Montgomery, Technical Editor

The engine is completely new. It is a 6 cylinder overhead valve in line engine, inclined 30 degrees to the right. Wedge type combustion chambers are used with a 8.5 to 1 compression.

Transmission Band Adjustment Kick-down: Loosen the band adjustment screw which is located on the left side of the transmission case near the throttle lever shaft. Loosen the nut and back off approximately

Continued on page 122



Ignition timing marks located on timing cover face.



Wide mouth brake reservoir easy to fill and check.

Service on spark plugs is easy, typically Chrysler.



Phillips' driver eases retainer springs removal.



At Left: Removal of axle shaft; this technique is new to Chrysler family.

"IMPORTS are here to stay"

FDR, Jr. operates a Fiat distributorship for southeastern states; he sees a permanent place for imported cars selling for \$2000 or under

By Franklin D. Roosevelt, Jr.

About the Author: "I'm making a lot more money and having a lot more fun than I ever made practicing law." That's how Franklin D. Roosevelt, Jr., looks at his 18-month-old Fiat distributorship. Roosevelt Automobile Co., which he heads, sells to dealers in Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Alabama, and Florida. Before he became a car dealer and distributor last year, Mr. Roosevelt served six years in the U.S. House of Representatives as congressman from New York City.

IT was recently reported that Mr. Henry Ford, II, stated that the "Big Three's" compact cars may well put the imports out of business. It is a tribute to free speech in American business that Mr. J. S. Kemp, Manager of the L-M division of Ford Motor Company, took issue with his boss at a meeting of English Ford Dealers and is quoted as having said:

"We hope to prove such statements wrong. I think Mr. Ford must have meant the higher-priced imports."

We agree with Mr. Kemp and we trust that Mr. Ford did refer to the higher priced imports because we are convinced, for a number of reasons, that the economy imports, as



Model Marcia Michels steps into the Fiat Motor's "Jolly." Car is a beach wagon adaptation of the Fiat 500 and has open sides and wicker-type seats.

distinguished from the American compact car, is here to stay. We also believe that there will always be a market in America for the quality imports and for the imported sports car.

First, let us take a look at the sales record of imported cars in the United States during the last few years. In 1955, 58,000 imports were sold in the United States. In 1956, 98,000 imported cars were sold. In 1957, this figure

Continued on page 126



Motor Age Editor Frank P. Tighe who interviewed Mr. Roosevelt for this story, takes wheel of a Fiat "Jolly."

Franklin D. Roosevelt, Jr., author of this article, sits behind his desk. On wall is portrait of his father.



NEW IMPORTED CAR REGISTRATIONS.

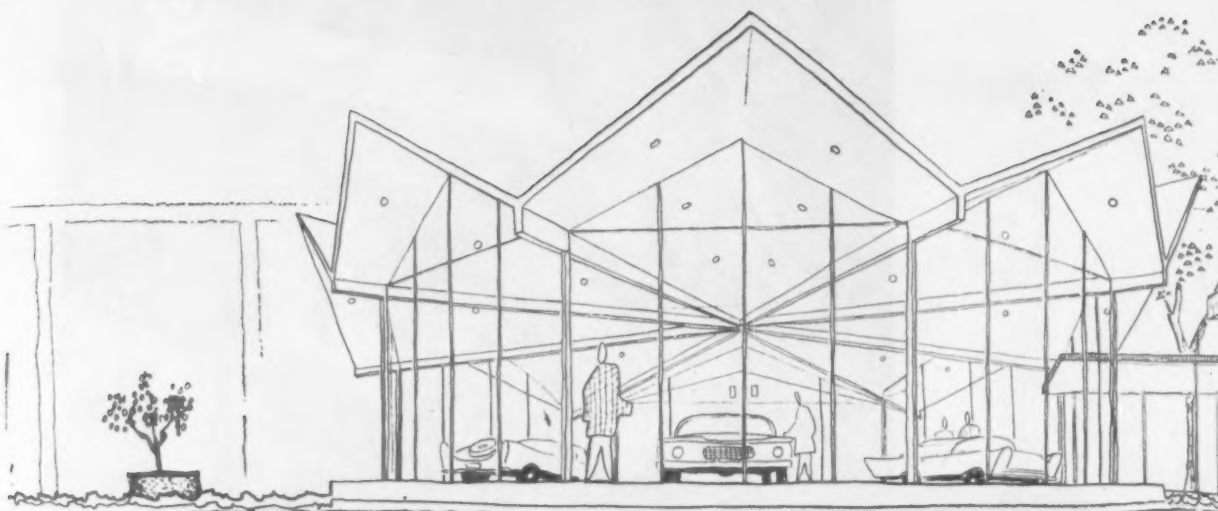
October

1959		1958	
Volkswagen	11,589	Volkswagen	6,823
Renault	8,700	Renault	5,710
Opel	3,250	English Ford	3,676
Fiat	2,955	Fiat	2,265
English Ford	2,929	Vauxhall	2,025
Simca	2,422	Hillman	1,876
Vauxhall	1,952	Opel	1,691
Triumph	1,946	Simca	1,560
Hillman	1,833	Triumph	1,480
Volvo	1,444	Volvo	1,416
All Others	12,903	All Others	10,391
Total	51,923	Total	38,625

First Ten Months

1959		1958	
Volkswagen	94,344	Volkswagen	65,245
Renault	73,944	Renault	37,419
English Ford	36,107	Fiat	16,663
Opel	33,097	English Ford	26,768
Fiat	32,409	Hillman	14,646
Simca	31,110	Vauxhall	14,010
Hillman	24,163	M.G.	13,931
Triumph	19,995	Simca	13,859
Vauxhall	19,216	Triumph	13,628
Volvo	15,659	Opel	12,169
All Others	127,361	All Others	76,565
Total	507,425	Total	304,844

Table of Imported Car Registrations (shown above) points up some of the growth pattern of imports in 1959.

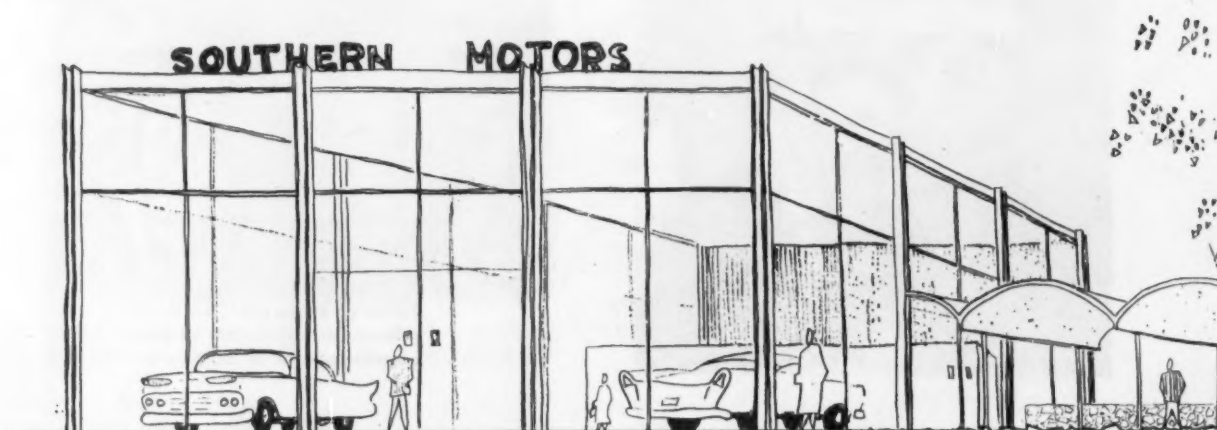


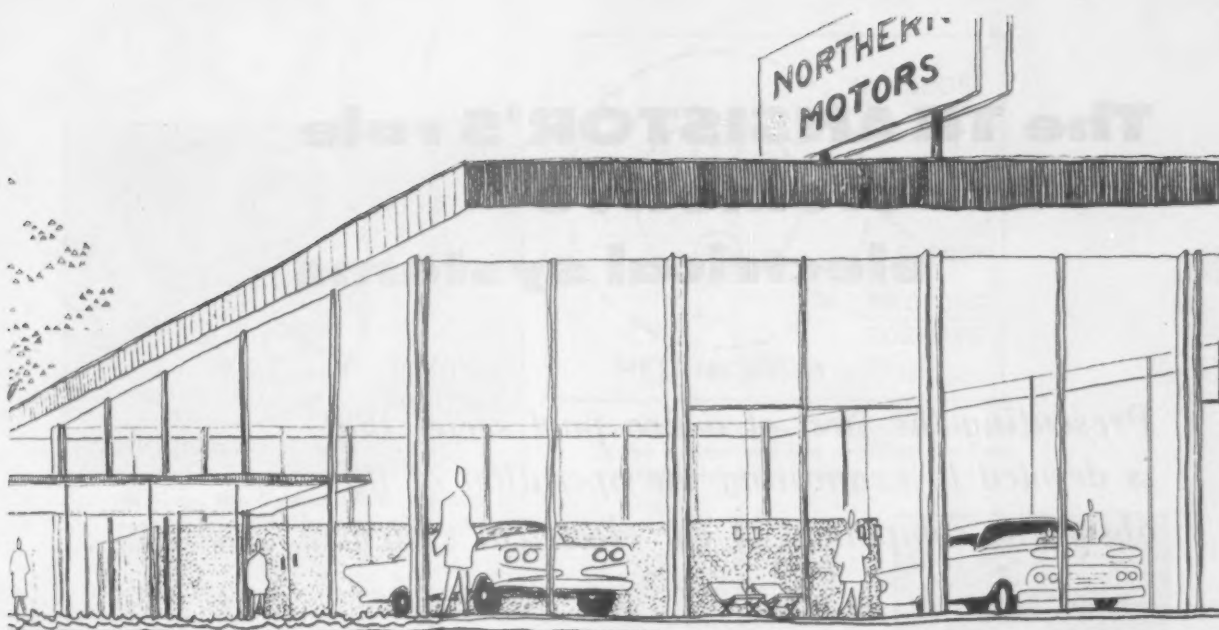
The care and speeding of **JUNIOR CAR sales**



*Prominent Eastern Seaboard car
dealer Dave Reese outlines his own
experience on compact car selling*

By Dave Reese, Oldsmobile
and Rambler dealer
Drexel Hill, Pa.





Drawings by Clifford E. Garner, a. i. a. architect, Arthur H. White Associates, Phila. Dealership depicted above suggests setup for a northern state location; below for dealership in a southern state.

CALL them small cars, compact cars, little leaguers or whatever, we choose to call them Junior Cars. And, our suggestion here is that it is highly important that we separate the "men from the boys."

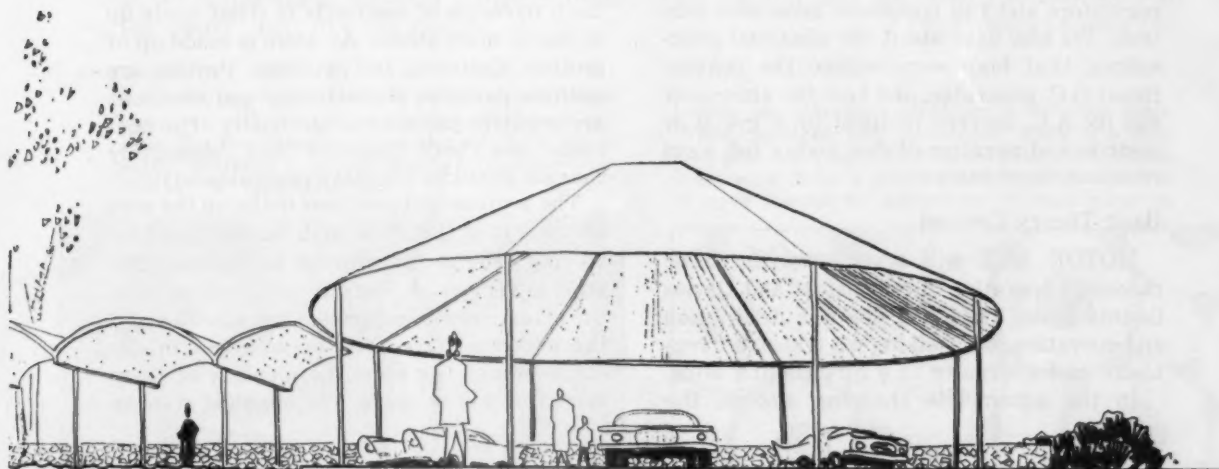
The big thinking behind the introduction of the Junior cars is to help the dealer increase his business and his profits. It is planned-plus business. It is a gigantic effort to reduce the import and impact of foreign cars.

Car makers have recognized the success of the Rambler and the Lark. This success is born, not from the number of units that were

sold and are being sold, but because of the success and the profit of the dealers handling these cars. This success is measured by added profit for the dealers. This is especially true for dealers whose first line is in the middle-class field.

But, this will not hold true with the Junior cars that have been recently introduced and for those to come in later months. It won't hold true UNLESS the Junior car dealers adhere to some of the principles and techniques used by middle price dealers who have suc-

Continued on page 104



The TRANSISTOR'S role in automotive electrical systems

*Presenting the first of a two part series that
is devoted to examining the operation of this
absorbing component of car electrical systems*

By Terence J. McCabe, Service Editor

AUTOMOTIVE electrical systems are changing rapidly. New discoveries as a result of this country's experiments with the atom will be changing the type of electrical units on every American automobile. A most recent advance, the transistor and diode are the most talked about and the least understood of the new advances in automotive electrical service.

We hear of all sorts of new systems that automobile manufacturers are using and will use in the future incorporating these new devices. Transistor radios and record players, transistorized ignition, transistorized voltage regulators and full transistor generator controls. We also hear about the electrical alternators, that may soon replace the conventional D.C. generator, and how the alternator has its A.C. current rectified by a group of positive and negative diodes, giving full wave rectification of current.

Basic Theory Covered

MOTOR AGE will cover only the basic theory of operation of transistors and Diodes in this issue. Then will follow a description and operation of a well-known transistor regulator and alternator in a forthcoming issue.

In the automobile charging system the

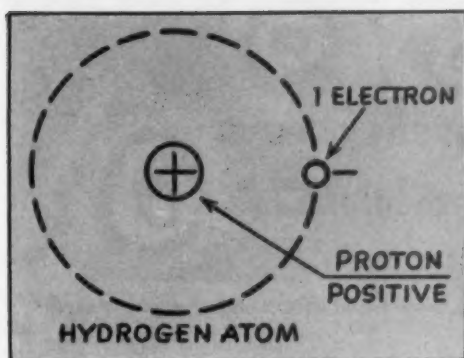
transistor is an electrical device used in generator regulators to control the generator field current. Thus it limits the output of voltage and current from the generator.

The transistor operates electronically. It needs no moving parts. There are various conditions set up that cause current to flow through it as well as how much is allowed to flow.

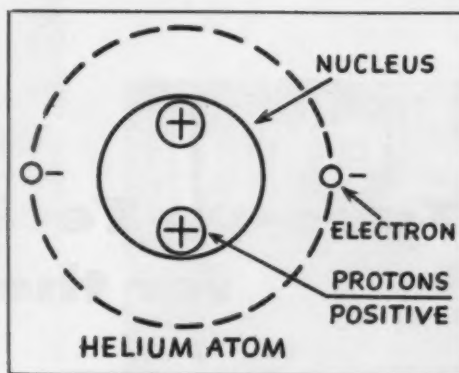
In order to fully understand the operation of the transistor or Diode, a brief review of the atom's structure is required.

All matter in the universe is made up of small invisible particles called molecules. Each molecule of matter is in itself made up of one or more atoms. An atom is made up of protons, electrons, and neutrons. Protons are positive particles of electricity and electrons are negative particles of electricity. The neutrons are both positive and negatively charged particles and have neutral polarity.

The protons and neutrons make up the core or nucleus of the atom with the electrons revolving around the protons or nucleus. The atom is very much like our solar system with the planets revolving around the sun. Because the neutrons have little or no effect in our discussion of the atom, no mention of them hereafter will be made. The simplest atom to

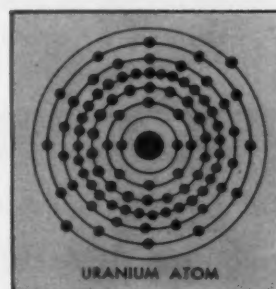
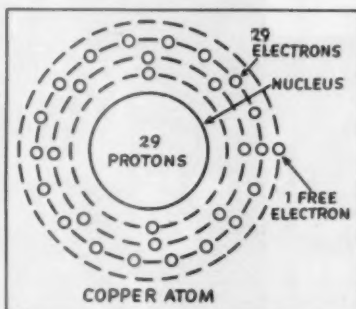


Hydrogen, the lightest atom, contains one positive proton in the nucleus and one negative electron in the outer orbit.



Helium atoms contain two positive protons in the nucleus and two negative electrons rotating around the nucleus.

Copper atom containing 29 protons and 29 electrons. Notice the one free electron in the outer-ring orbit indicating the reason copper is an excellent electrical conductor.



Uranium, a very complex atom, has 92 positive protons and 92 negative electrons rotating about the outer orbit of atom.

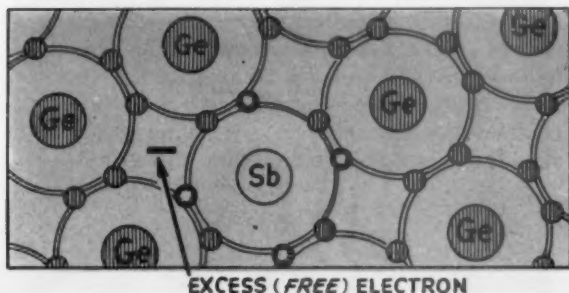
examine is the lightest, the Hydrogen atom. It consists of one proton forming the center, or nucleus, and one electron orbiting around the proton. All atoms have matching amounts of protons and electrons. The Uranium atom is a complex atom with 92 protons and 92 electrons. The electrons revolving about the atoms center are at different distances from the center. Just like the planets are set at

various distances from the sun.

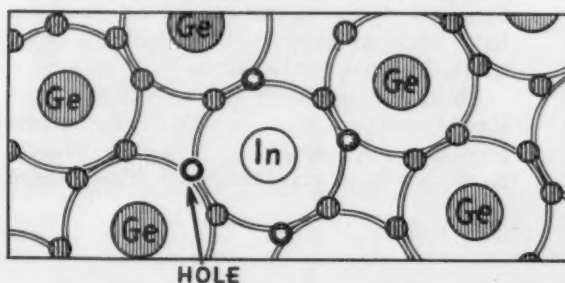
The electrons fall into rings or orbits around the protons. You will note from the sketch of the Uranium atom (*above*) that the outer orbit contains only two electrons. The outer orbit of electrons is of prime importance in this discussion; references will

Continued on page 105

Antimony has five electrons in its outer orbit. When combined with germanium one free electron is left over. This free electron moves through the material easily. Material is called negative type combination or "N" type material.



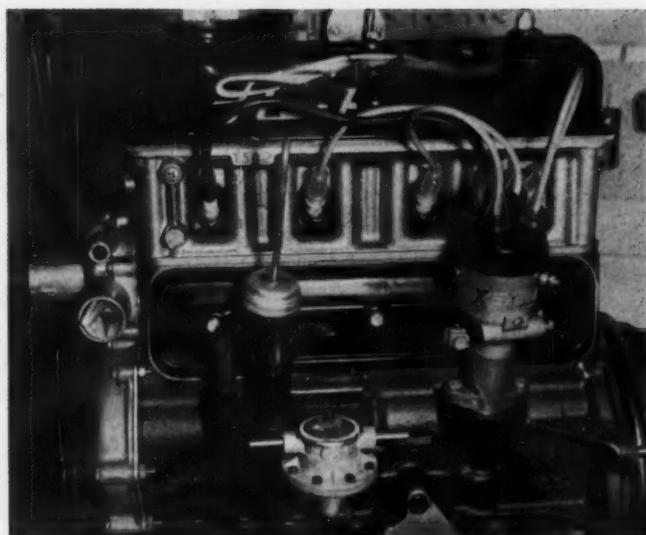
Indium has only three electrons in its outer orbit. When combined with germanium, there is a deficiency of one electron called a "hole." This hole is considered to be a positive electrical charge free to move through the positive or "P" type material.



Tune-up Techniques for the SIMCA

Conventional tune-up procedures and gages provide profitable assistance in tuning the Simca to high peak

By W. H. Wolfe, Managing Editor



Conventional arrangement of "Flash" components.

THE French Simca, imported by Chrysler has been here in the USA for a number of years. Many owners have at some time or other called upon you for service. One of the easiest and most profitable services you can render these owners is tune-up. Performance diagnosis and procedures that you have used on domestic cars, can easily be adapted for use on the Simca.

First, the engine is a conventionally designed overhead valve four cylinder engine producing 48 horsepower. It will develop 54 ft. lbs. of torque at 2800 rpm. This engine

they call the "Flash." On their "Flash Special," the engine is rated at 57 horsepower and develops 66.5 ft. lbs. torque at 3100 rpm. The bore and stroke is the same for each engine. Bore 2.913. ; Stroke 2.952 in. The firing order is 1-3-4-2.

In performing any tune-up regardless of the type of engine, a definite procedure should be followed. Every tune-up technician has his own way of approaching each job. Some first take a vacuum reading to get a general idea as to the overall engine condition. Others take

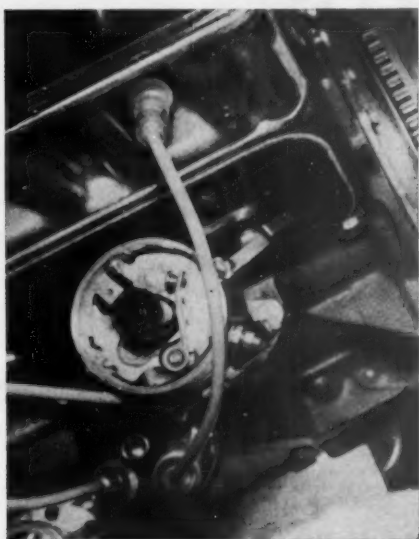
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Rocker arm adjustment with feeler gage and tool.



Offset distributor drive simplifies installation.

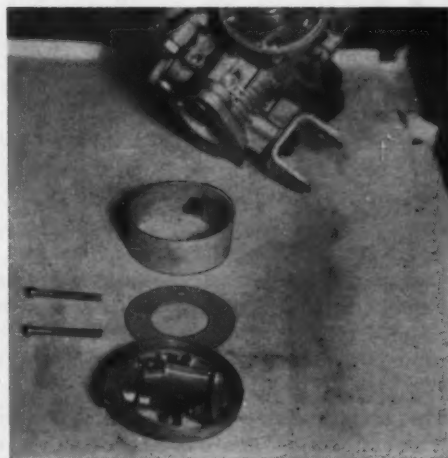
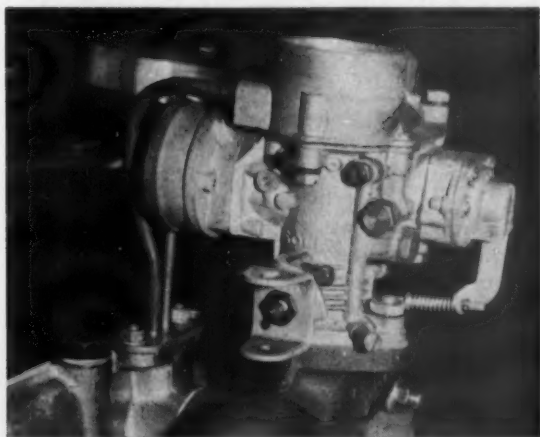


Breaker points adjusted by cam screw eccentric.



Line-up three dots for correct choke adjustment.

Choke air drawn into thermo-housing from air-horn.



Choke components are serviced off the car.

TAX ASPECTS of BAD DEBTS

*A close look at some of the
situations indicative of
tax benefits as applied to
your own business operation*

DEBTS can go bad in any business, whether you are selling products or services. However, if you are using the accrual method of accounting, uncollectable business debts are deductible in computing your income tax.

The circumstances under which the debt will be considered uncollectable for tax purposes, and the manner in which you can deduct it are explained hereby the American Institute of Certified Public Accountants.

Bad debt deductions are allowable not only for debts arising out of your business, but for non-business debts as well. However, the non-business debts are deductible only within the limits applicable to capital losses.

This article will be concerned with business bad debts, which are debts created or ac-

quired in your business; these are fully deductible.

When is a Debt Bad?

The deduction must be taken for the year in which the debt becomes bad. You need not always wait until a debtor is declared bankrupt before you can claim a bad debt deduction. In some cases, it is clear before a bankruptcy settlement is reached that a debt is worthless.

Bankruptcy may confirm beyond any doubt that a debt is worthless but this in itself does not require that you wait for bankruptcy proceedings to be completed. Worthlessness is the test. In other words, the debt must seem uncollectable now and in the future. This is

Continued on page 74



Scoring a "profit touchdown" requires management skills and know-how in today's business world.

WATCH FOR THESE MANAGEMENT & MERCHANDISING SPECIAL ARTICLES IN FORTHCOMING ISSUES

Throughout 1960, MOTOR AGE will continue to present to its readers the popular series of special management and merchandising articles that was begun early last year.

These special articles represent extensive research and critical thinking on major subjects of significance to business men in the field of automotive service management.

Next month, for example, a report on Truck Service and Its Profit Potentials will be featured. Car dealer management, the independent garageman, and the service station operator will be presented with down-to-earth facts and ideas on boosting service profits on this important segment of the vehicle market. Truck service discussed will pertain particularly to panel, pick-up and small van-type trucks.

Subsequent issues of MOTOR AGE will delve into themes that include "Brakes and Brake Specialty Shops," "The Muffler Market," and "The Merchandising of Shock Absorbers."

Next month's issue (February) will of course contain the regular service and management features of MOTOR AGE. Among special attractions will be a report on the NADA Convention. Then the second section of the technical report on the introduction of the transistor to automotive electrical systems will be given. Also in the table of contents will be an on-the-scene account of the theory and practice of automotive training learned by the cadets at the United States Military Academy at West Point.

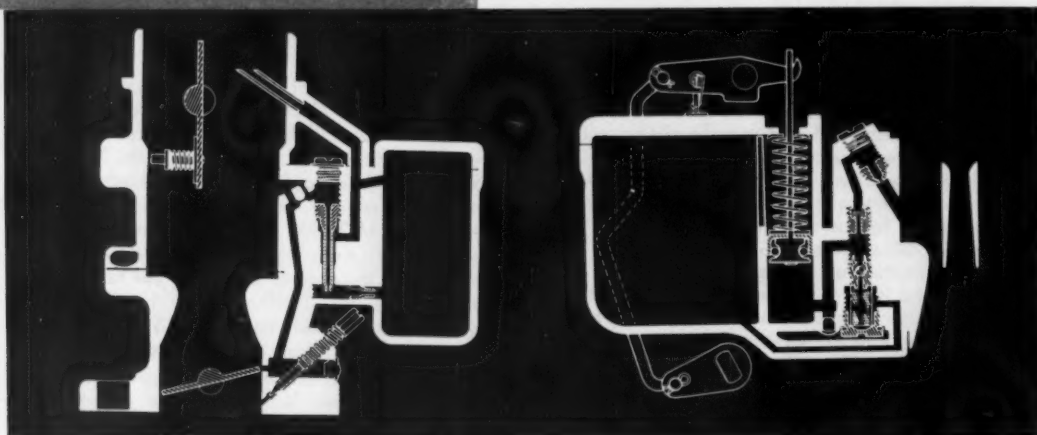
Step by Step Service on small car CARBS



Volkswagen unit showing high speed and low speed adjusting screws.

CARTER Carburetor, Division of ACF. Industries, Incorp., of St. Louis, Missouri, has introduced a newly designed and tested series of carburetors for the small car replacement service market. American service mechanics and owners have been clamoring for years to have a replacement unit of superior quality, made available at reasonable American prices.

Carter, after extensive testing and research now makes available the time tested and proven "WO" carburetor, redesigned and refined for the Volkswagen, Hillman and English Ford cars. This unit is basically very familiar to every American mechanic, having been used for many years on the military



Low speed circuit and well jet is shown. Parts easily serviced.

Pump circuit shows spring-loaded wet type, delayed action pump.

*Assure your customers flawless performance,
exceptional economy and greater flexibility
with these new carburetors*

By William M. Montgomery, News Editor

jeep, other commercial vehicles and passenger cars.

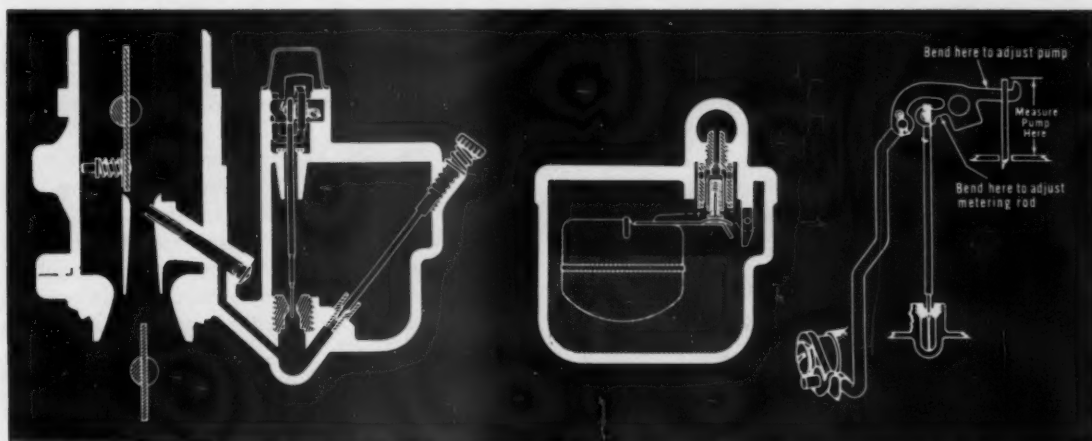
The complete conversion carburetor is available with all the required fittings for the usual simple installation associated with any American replacement unit.

The carburetor has a single float arrangement with a spring loaded float needle valve, to give consistent fuel level stability. Float level is adjusted simply by inverting the bowl cover upon which the float is mounted. Allow the float to rest on the spring loaded needle of its own free weight. Remove bowl cover gasket, gage the float as required by factory specifications. Place the gage between bowl cover and top side of free end of float. Bend the

float lip up or down to adjust float level. Do not bend the float arm. Float setting must be checked with the bowl cover held at eye height in a level position. A float drop adjustment is provided to assure full volume of fuel in the bowl at high speed. Float drop adjustment is made by bending the two stops on the float arm that bear against the fulcrum pin support.

The Low-speed system is similar to that of all Carter circuits. It uses the well type of low-speed tube with a plug above it for ease in removing. The circuit contains an idle bypass, economizer, air-bleed, idle port and mixture adjustment screw. The idle system uses

Continued on page 96



High-speed circuit shows external adjustment for high-speed.

Cross section of spring-loaded needle and float bowl circuit.

Points for high-speed & pump adjustment. Bend with special tool.



BY RUSSELL W. CASE, JR.

LOOKING AHEAD in the Automotive Service Industry..

*Motor Age's and Commercial Car
Journal's publisher takes a keen
look into the automotive future*

FIRST, let's talk about People, because all markets begin and end with people. By the end of 1970 there are expected to be 219,500,000 people in the United States, or another 35,000,000 people to make more business.

There will be wide variations in percentage of increase in each section of the country. More and more our market is becoming regional and shifting in relative value between regions. It is no longer possible to take one area and project it to arrive at a national market picture. The national market is composed of a sum of regional markets. Each region must be judged on its own merits.

Pacific Coast Expansion

For example, between now and 1965 the Pacific Coast is expected to increase in population 59 per cent while the West North Central States will be increasing just 12.9 per cent, and New England 13.9 per cent.

Next, let's talk about Automobiles.

MOTOR AGE forecasts that there will be 71,800,000 passenger cars, and 14,500,000 trucks registered by 1970, or a total of about 86,300,000 registrations.

We will have all kinds of automobiles. Conventional cars, luxury models, compact cars, sport cars, midget cars, foreign and domestic cars.

1960 will see the greatest stir in the Automotive Industry within memory. During 1959 the progress of Studebaker's Lark and American Motors' Rambler in the compact car field have been notable. Now they are being joined by three new cars—Corvair by Chevrolet; Falcon by Ford; Valiant by Chrysler—and more to come.

In fact . . . Buick, Olds, and Pontiac are all planning medium priced compact cars which will be announced just prior to introduction of 1961 standard lines of cars.

Continued on page 100

BUSINESS GUIDE

FOR NINETEEN HUNDRED 60

By MARCUS AINSWORTH, Statistical Editor

THE year 1959 has been one of sharply increased activity over 1958 in all phases of the country's economy. Manufacturing, wholesale and retail business has been good. Employment increased materially and unemployment was considerably lower than during 1958. Weekly and hourly earnings in the manufacturing industries have risen to new all-time highs. The gross National Prod-

uct for the first three quarters of 1959 increased by about 9 per cent or 5.9 billion dollars.

Before formulating any opinions as to the future of the various components of the Automotive Service Industry, it seems advisable to first analyze the general business activity of the country during 1959. This activity is best

Continued on next page





BUSINESS GUIDE FOR NINETEEN HUNDRED 60

illustrated by Gross National Product, Industrial Production, Personal Income, Retail Sales and Employment and Unemployment. A review of each of these indices will better enable us to forecast what the Automotive Service Industry may expect during the coming year.

Gross National Product, the market value of all goods and services produced throughout the country, rose from a low of \$431.0 billion for the first quarter of 1958 to \$457.1 billion during the last quarter of that year. The seasonally adjusted quarterly totals at annual rates amounted to \$441.7 billion for all of 1958, a decline of only eight-tenths of a billion from 1957. It continued its climb during 1959 to \$484.5 billion for the second quarter of the year, but by the end of the third quarter had dropped to \$478.6 billion, a decrease of 5.9 billion dollars. This decline can be directly attributed to the longest extended strike in the history of the steel industry. With the resumption of steel production as a result of the Federal Government injunction under the Taft-Hartley Act, fourth quarter Gross National Product should be at least equal that of the third quarter, ending the year with an average annual rate of approximately \$480.0 billion. By the end of 1960 it is quite possible that the total of all goods and services produced will reach \$500,000,000,000.

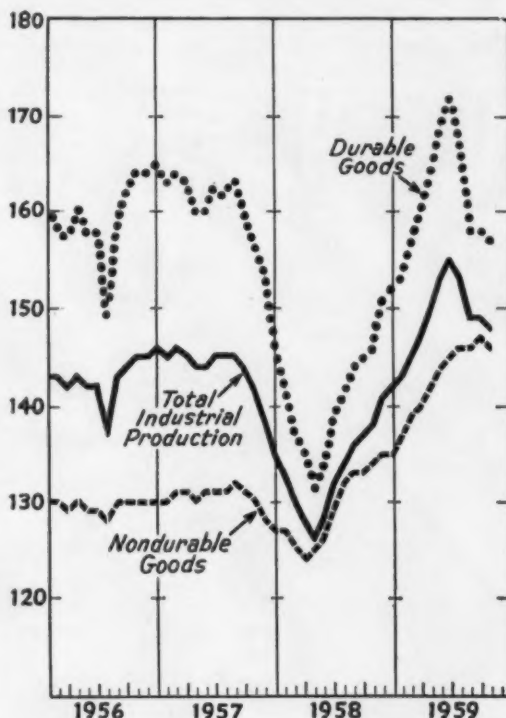
Personal Income, which is the current income received from all sources, continued the steady climb maintained throughout the

latter half of 1958 and reaches \$366.9 billion by December of that year. By the end of June 1959 the annual rate of personal income had jumped to \$383.8 billion. During July and August it declined by 3.8 billion dollars, but in September and October there was a resumption of the increase but at a much slower rate. In the first ten months of 1959 personal income increased by nearly \$13 billion or slightly over 3 per cent.

One of the most sensitive indices of business activity is that of Industrial Production. This is the measure of the changes in the output of manufactures and minerals. Based on the monthly average of 1947-1949 the

INDEX OF INDUSTRIAL PRODUCTION

Seasonally Adjusted: 1947-49 = 100



seasonally adjusted index had dropped to 126 in April, 1958, the lowest of any month during the years 1955 through 1958. This downward trend was stopped in May and by December the upswing had reached an index of 142, or an annual average for 1958 of 134. By June of 1959 the index of industrial production had continued its sharp upward climb to 155. In July the production of steel stopped and the index of production dropped from 155 to 149 in both August and September with a further decline in October to 148. With the resumption of steel production the monthly average output for the year should be in the neighborhood of 150 or 16 points higher than the average for 1958.

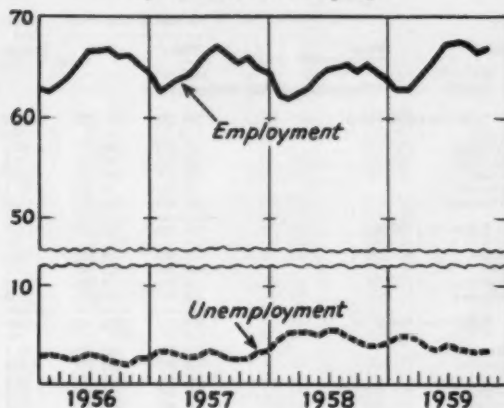
Consumer Purchasing

Despite the steel strike and the resulting unemployment of the strikers and those forced out of work in other industries due to lack of steel, retail sales were greater in dollar volume than for any previous year.

The monthly average of consumer purchases at the retail level amounted to \$15,811 millions in 1956. They increased during 1957 to \$16,667 million and showed a further increase in 1958 to \$16,696 million. During 1959 this monthly average of retail sales has again increased to \$17,976 millions. While some of these increases in total monthly average retail sales can be attributed to advancing consumer prices, the great bulk of them are due to more people buying and in larger quantities. From 1956 through 1959 the dollar volume of retail sales increased 13.8 per cent, but in that same period consumer prices advanced only about 8 per cent.

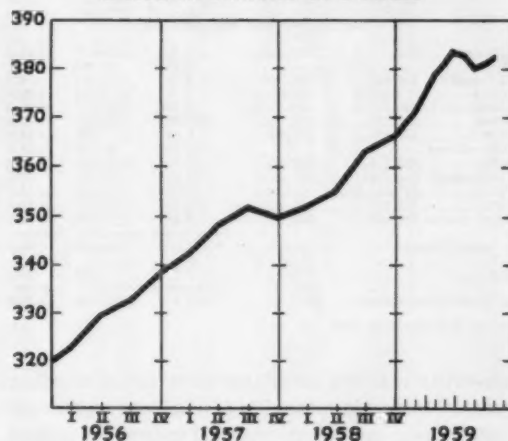
As to 1960, present indications are that all segments of business activity will continue to advance with the total value of all goods and services produced reaching \$500 billion and the Index of Industrial Production climbing to a possible 160. The monthly average of retail sales could conceivably reach the \$20,000 million mark and employment be in the neighborhood of 70,000,000. However, all this

LABOR FORCE (Millions of People)



PERSONAL INCOME

Seasonally Adjusted at Annual Rates;
Listed in Billions of Dollars



is based on the recent news of the steel strike settlement and on the assumption that the contemplated strike of railroad workers will not materialize.

The steel strike settlement is indeed encouraging news. But predictions can fall off if a satisfactory settlement is not reached in the railroad industry.

As you can observe on the accompanying charts, dips occur in the 1959 fourth quarter of all the economic indicators, some of which are seasonal but others are contra-seasonal.

The automotive industry has kept pace with the general business activity with all phases

Continued on next page

U.S. Production of Passenger Cars by Makes*

'60 BUSINESS GUIDE

Make	Year to Date		Per Cent Change
	1959	1958	
PASSENGER CAR PRODUCTION			
Total—American Motors Corp.....	394,703	213,761	+84.6
Chrysler.....	67,473	48,677	+38.6
De Soto.....	40,722	36,032	+13.0
Dodge.....	186,271	112,629	+65.4
Imperial.....	20,444	13,441	+52.1
Plymouth.....	403,679	361,430	+11.7
Total—Chrysler Corp.....	718,769	572,209	+25.6
Edsel.....	29,677	25,782	+15.1
Ford.....	1,504,189	1,022,947	+47.0
Lincoln.....	29,637	25,516	+16.9
Mercury.....	163,442	126,325	+21.5
Total—Ford Motor Co.....	1,717,115	1,200,570	+43.0
Buick.....	227,069	282,843	-19.2
Cadillac.....	135,912	123,807	+9.8
Chevrolet.....	1,396,214	1,236,552	+13.1
Oldsmobile.....	359,585	305,982	+17.6
Pontiac.....	352,128	215,562	+77.3
Total—General Motors Corp.....	2,503,026	2,134,636	+17.2
Total—Studebaker-Packard Corp.....	151,173	55,263	+173.6
Checker Cab.....	5,560	3,267	+70.2
Total—Passenger Cars.....	5,490,366	4,179,706	+31.3

TRUCK AND BUS PRODUCTION			
Chevrolet	319,794	274,177	+16.6
G.M.C.	74,018	60,924	+21.5
Diamond T.	5,261	5,858	-9.9
Divco	3,740	2,884	+29.7
Dodge and Fargo	70,224	57,877	+21.3
Ford	327,086	239,547	+36.5
F.W.D.	1,051	1,214	-13.4
International	141,262	81,090	+74.3
Mack	16,762	14,085	+19.0
Studebaker	11,058	10,406	+6.3
White	19,634	17,194	+14.2
Willys	110,457	92,099	+19.9
Other Trucks	3,548	3,094	+14.7
Total—Trucks	1,163,947	860,449	+26.3
Buses	2,533	3,069	-15.8
Total—Motor Vehicles	6,596,846	5,043,164	+30.8

*—As of December 26, 1959.

showing marked increases over the preceding year. Production, total registrations, domestic sales (new registrations) all indicate marked improvement over those of 1958 and should continue on the upgrade during 1960.

Total motor vehicle registrations during 1959 will be close to 70,097,000 vehicles, an

increase of 3.3 per cent over those registered during 1958. It is significant that the annual rate of change has been reversed from that which prevailed since 1955. That year showed an increase over the previous year of 6.9 per cent. In 1956 the increase was 4.0 per cent, 1957, only 3.3 per cent and in 1958 the percentage increase was only 1.7 per cent. For 1959 the rate of change increased almost double that of 1958.

This forecast of motor vehicle registrations is based on an annual survey conducted by MOTOR AGE, the results of which, past experience has shown, will very closely approximate final registrations when they are announced several months from now. Of the 70,097,000 registered vehicles 58,907,000 will be passenger cars as compared with 57,073,000 in 1958, an increase of 3.2 per cent. Trucks and buses combined will total 11,191,000 as compared with 10,790,000 registrations during 1958. Trucks are generally showing a higher increase in rate of registrations than passenger cars as during 1959 they advanced by 3.7 per cent.

California will lead the states with 7,251,000 registrations of cars, trucks and buses. New York, Texas and Pennsylvania follow in the order named, with well over 4,000,000 each. The ten leading states, which include those listed above, plus Ohio, Illinois, Michigan, New Jersey, Florida and Indiana, account for 37,861,000 registrations or 54 per cent of the total registered vehicles.

Geographically, the South Atlantic, East

Motor Vehicle Registrations by Geographic Divisions

	Passenger Cars		Per Cent Increase	% of Total		Total Vehicles		Per Cent Increase	% of Total	
	1959	1958		1959	1958	1959	1958		1959	1958
New England	3,372,200	3,294,646	2.4	6.72	5.77	3,637,100	3,750,628	2.3	5.47	5.53
Middle Atlantic	10,043,500	9,775,757	2.7	17.06	17.13	11,438,560	11,125,202	2.8	16.32	16.39
South Atlantic	7,898,823	7,529,744	4.9	13.41	13.19	9,484,272	9,024,379	5.1	13.53	13.30
East North Central	12,327,600	12,018,696	2.6	20.93	21.06	14,179,400	13,828,013	2.5	20.23	20.30
East South Central	3,420,600	3,253,573	5.1	5.81	5.70	4,270,000	4,070,136	4.9	6.09	6.00
West North Central	5,481,400	5,323,075	3.0	9.31	9.33	6,933,500	6,721,806	3.1	9.89	9.90
West South Central	5,661,700	5,425,113	4.4	9.61	9.51	7,220,200	6,905,831	4.5	10.30	10.16
Mountain	2,474,806	2,384,473	4.7	4.20	4.14	3,262,401	3,111,379	4.6	4.65	4.58
Pacific	8,226,000	8,067,454	1.7	13.96	14.17	9,472,100	9,325,969	1.6	13.52	13.74
Total—United States	58,906,632	57,072,533	3.2	100.00	100.00	70,097,473	67,962,942	3.3	100.00	100.00

States in the various divisions are: Zone 1: Conn., Me., Mass., N.H., R.I., Vt.—Zone 2: N.J., Pa., N.Y.—Zone 3: Del., D. of C., Fla., Ga., Md., N.C., S.C., Va., W. Va.—Zone 4: Ill., Ind., Mich., Ohio, Wisc.—Zone 5: Ala., Ky., Miss., Tenn.—Zone 6: Iowa, Kan., Minn., Mo., Neb., N.D., S.D.—Zone 7: Ark., La., Okla., Tex.—Zone 8: Ariz., Colo., Ida., Mont., Nev., N.M., Utah, Wyo.—Zone 9: Cal., Ore., Wash.

Forecast of 1959 Motor Vehicle Registrations

As of the end of the Registration Year

These data do not include publicly owned vehicles of which there were approximately 577,000 cars in 1958

State	Passenger Cars			Trucks and Buses			Total Motor Vehicles		
	1958	1959	Per Cent Change	1958	1959	Per Cent Change	1958	1959	Per Cent Change
Alabama.....	836,100	887,319	+ 5.6	209,400	200,299	+ 4.6	1,145,500	1,087,568	+ 5.3
Alaska.....	90,700	49,885	+ 1.6	18,600	17,212	+ 8.1	89,300	87,097	+ 3.3
Arizona.....	430,200	465,496	+ 8.1	114,700	106,521	+ 7.7	544,900	512,919	+ 6.4
Arkansas.....	466,700	447,434	+ 4.3	106,000	108,901	+ 3.2	601,700	636,425	+ 4.0
California.....	6,323,000	5,239,795	+ 1.3	920,000	927,468	+ 0.1	7,251,000	7,168,233	+ 1.2
Colorado.....	680,000	651,939	+ 4.3	188,600	183,283	+ 2.9	868,600	835,222	+ 4.0
Connecticut.....	920,800	909,764	+ 1.2	115,900	114,025	+ 1.6	1,036,700	1,023,789	+ 1.3
Delaware.....	137,300	132,563	+ 3.6	46,000	42,262	+ 6.8	182,300	174,825	+ 4.3
District of Columbia.....	177,000	174,277	+ 1.6	20,000	19,820	+ 0.9	197,000	194,105	+ 1.5
Florida.....	1,910,900	1,768,577	+ 8.0	297,000	272,129	+ 9.1	2,207,900	2,040,706	+ 8.2
Georgia.....	1,100,000	1,075,048	+ 2.2	258,000	254,639	+ 1.3	1,358,000	1,330,688	+ 2.0
Idaho.....	245,000	240,056	+ 2.1	96,000	92,689	+ 5.7	343,000	332,747	+ 3.1
Illinois.....	3,205,000	3,121,241	+ 2.7	445,000	438,276	+ 2.0	3,650,000	3,557,517	+ 2.6
Indiana.....	1,610,000	1,568,713	+ 2.6	338,000	335,232	+ 2.3	1,948,000	1,895,945	+ 2.6
Iowa.....	1,043,600	1,001,429	+ 4.2	233,400	222,890	+ 4.7	1,277,000	1,224,279	+ 4.3
Kansas.....	854,600	839,592	+ 1.8	276,400	253,678	+ 9.0	1,131,000	1,093,270	+ 3.4
Kentucky.....	905,000	887,167	+ 2.0	234,000	224,436	+ 4.3	1,139,000	1,111,603	+ 2.5
Louisiana.....	913,000	872,380	+ 4.6	219,000	213,206	+ 2.7	1,132,000	1,085,588	+ 4.3
Maine.....	287,000	283,146	+ 1.6	71,600	70,809	+ 1.1	358,600	353,955	+ 1.5
Maryland.....	950,100	906,000	+ 4.6	142,000	139,000	+ 2.1	1,092,100	1,047,000	+ 4.3
Massachusetts.....	1,940,000	1,497,852	+ 2.8	164,000	161,039	+ 1.6	1,724,000	1,678,991	+ 2.7
Michigan.....	2,787,000	2,699,914	+ 2.5	395,800	381,529	+ 3.7	3,182,800	3,081,434	+ 2.6
Minnesota.....	1,240,000	1,204,823	+ 2.9	250,500	254,306	+ 2.0	1,490,500	1,459,129	+ 2.8
Mississippi.....	525,500	486,982	+12.5	188,500	175,821	+ 7.2	714,000	662,813	+11.1
Missouri.....	1,350,000	1,296,043	+ 4.0	323,300	315,372	+ 2.5	1,673,300	1,611,415	+ 3.7
Montana.....	254,000	244,775	+ 3.8	112,000	106,588	+ 4.8	366,000	351,363	+ 4.1
Nebraska.....	820,000	816,255	+ 0.7	162,200	161,797	+ 0.7	982,200	978,052	+ 0.8
Nevada.....	115,600	109,799	+ 5.3	32,482	31,294	+ 3.5	148,101	141,083	+ 5.4
New Hampshire.....	199,000	191,605	+ 3.8	41,000	40,418	+ 1.4	240,000	232,023	+ 3.4
New Jersey.....	2,000,000	1,944,896	+ 2.8	268,000	262,468	+ 1.4	2,268,000	2,207,364	+ 2.7
New Mexico.....	304,000	287,048	+ 5.9	103,000	98,457	+ 4.6	407,000	385,505	+ 5.6
New York.....	4,440,000	4,343,501	+ 2.2	520,000	510,969	+ 1.8	4,960,000	4,854,470	+ 2.2
North Carolina.....	1,310,000	1,226,403	+ 6.6	297,200	292,258	+ 5.3	1,607,200	1,518,661	+ 6.4
North Dakota.....	223,000	218,929	+ 1.9	108,000	102,822	+ 5.0	331,000	321,751	+ 2.9
Ohio.....	3,470,000	3,380,301	+ 2.6	422,300	413,681	+ 2.0	3,892,300	3,794,182	+ 2.6
Oklahoma.....	842,000	813,442	+ 3.5	274,000	259,549	+ 5.6	1,116,000	1,072,990	+ 4.0
Oregon.....	779,000	758,705	+ 2.7	99,300	70,207	+ 1.3	848,300	828,912	+ 2.3
Pennsylvania.....	3,603,500	3,487,360	+ 3.3	609,000	578,068	+ 5.7	4,212,500	4,065,428	+ 3.7
Rhode Island.....	292,100	283,113	+ 3.2	38,400	35,573	+ 7.9	330,500	318,686	+ 3.7
South Carolina.....	675,500	640,622	+ 5.4	162,000	146,535	+15.2	837,500	787,160	+ 7.2
South Dakota.....	250,000	244,004	+ 2.5	89,300	87,906	+ 1.6	339,300	331,910	+ 2.2
Tennessee.....	1,054,000	1,012,085	+ 4.1	217,500	216,037	+ 0.7	1,271,500	1,228,132	+ 3.5
Texas.....	3,440,000	3,291,857	+ 4.5	670,500	618,971	+ 6.3	4,110,500	4,110,828	+ 4.9
Utah.....	316,000	300,464	+ 5.2	75,800	72,487	+ 8.7	391,800	372,951	+ 5.9
Vermont.....	132,500	129,186	+ 2.6	14,000	14,119	+ 0.8	146,500	143,294	+ 2.2
Virginia.....	1,157,900	1,135,969	+ 1.9	230,500	223,404	+ 3.2	1,388,400	1,359,363	+ 2.1
Washington.....	1,073,300	1,040,099	+ 3.2	230,200	223,229	+ 3.1	1,303,500	1,263,327	+ 3.2
West Virginia.....	480,223	465,294	+ 3.2	133,899	120,577	+10.9	614,122	585,871	+ 4.8
Wisconsin.....	1,275,000	1,248,029	+ 2.1	250,700	247,406	+ 1.3	1,525,700	1,495,435	+ 2.0
Wyoming.....	130,000	124,902	+ 4.1	60,000	58,286	+ 8.5	190,000	183,188	+ 5.4
Total.....	58,906,632	57,872,533	+ 3.2	11,190,941	10,790,409	+ 3.7	70,097,473	67,662,942	+ 3.3

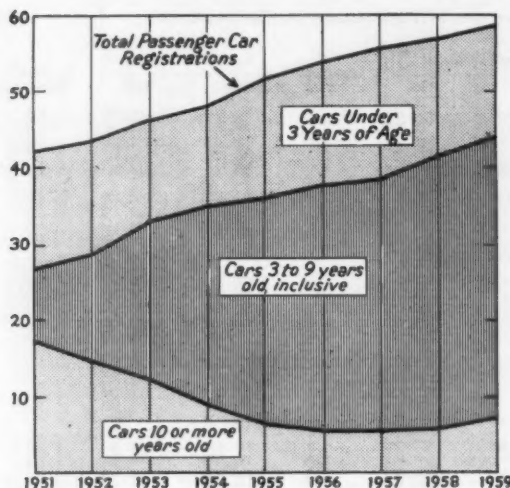
South Central and Mountain states will record the largest increases in vehicle registrations with gains of 5.1 per cent, 4.9 and 4.8 per cent respectively. The Pacific states will show the lowest percentage increase of any of the nine geographic divisions with only 1.6 per cent. This too is a reversal of a trend as for many years the Pacific state area has consistently maintained a high percentage increase over the preceding year.

These all-time high registrations indicate a tremendous market for the automotive parts, accessories, equipment, and supplies manufacturer; the automotive wholesaler;

the car dealers; the independent repair shop; and the gasoline service stations. Since 1954 total registrations through the end of 1959 have increased by 22 per cent. Present indications are that the number of automotive wholesale and retail outlets have not kept pace with registrations. This indicates a greater potential market for each establishment. Automotive wholesale establishments, according to preliminary reports of the Bureau of the Census, have increased by approximately 10 per cent; car dealers large enough to maintain a payroll are about the

Continued on next page

Registered Cars in Use by Age Groups



Year	Under 3 years		3 to 9 years, incl.	
	Number	Per Cent of Total	Number	Per Cent of Total
1951.....	15,312	36.4	9,756	23.2
1952.....	14,656	33.8	13,985	32.3
1953.....	13,274	28.7	20,779	45.0
1954.....	13,089	27.2	26,154	54.3
1955.....	15,914	30.6	29,679	57.2
1956.....	16,582	30.7	32,202	59.6
1957.....	17,666	31.6	33,002	59.0
1958.....	15,904	27.9	35,691	62.7
1959.....	15,074	25.6	36,817	62.5

same as in 1954, and gasoline service stations have increased in number by about 12 per cent.

The greatest potential for the sales of replacement parts and their installation is in that group of passenger cars whose age ranges from 3 to 9 year old inclusive. These are the cars on which it is economically sound to perform service. The average car under three years of age usually has not acquired enough mileage to require other than tune-up, plugs, brake lining, front-end alignment and possibly body paint and fender work. For those over 9 years of age, it is sometimes not economically sound to put them in first class condition as the cost of labor and parts, in most instances, would exceed the value of the car.

This major serviceable age segment of the registered cars from 3 to 9 years old inclusive has grown rapidly from 1951 when about 10

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million were in that group. In 1959 there were approximately 63.8 million. Twenty-three per cent of the car registrations were in that segment in 1951. Today it includes 62.5 per cent of the car registrations. Intervening yearly data will be found in the accompanying table and is also presented graphically. Trucks also provide a sizeable market for the sales of parts and accessories, and except for those truck fleets which have their own service establishments, they also add greatly to the potential of the independent repair shop and gasoline service stations with repair facilities.

Automotive Wholesaler Sales

The yearly sales volume of automotive wholesalers has been increasing at a steady rate. Sales of parts, accessories, equipment, supplies, and tires and tubes amounted to \$3.965 billion in 1956, up again to \$4.190 billion in 1957 and by the end of 1958 had reached \$4.477 billion. It is estimated on the basis of ten months returns for 1959 that the automotive wholesaler volume, exclusive of sales of vehicles, will reach \$4.760 billion. Comparative monthly sales for 1959 and 1958 will be found in the accompanying table which also indicates that the sales are up about 6.5 per cent in 1959 over 1958.

While automotive wholesalers, including

Monthly Sales of Automotive Jobbers, Incl. Tire and Tube Wholesalers

	1959	1958	% Gain
Jan.....	\$ 352,000,000	\$ 350,000,000	0.57
Feb.....	333,000,000	324,000,000	2.78
Mar.....	375,000,000	337,000,000	11.27
Apr.....	392,000,000	368,000,000	6.52
May.....	389,000,000	371,000,000	4.85
June.....	429,000,000	376,000,000	14.10
July.....	419,000,000	387,000,000	8.27
Aug.....	405,000,000	379,000,000	6.86
Sept.....	428,000,000	389,000,000	10.00
Oct.....	439,000,000	426,000,000	3.05
Nov.....	—	379,000,000	—
Dec.....	—	391,000,000	—
Total—10 Mos.	\$3,961,000,000	\$3,707,000,000	6.85
Total—Year*..	\$4,760,000,000	\$4,477,000,000	6.50

* Estimated for 1959

tire and tube jobbers, increased their sales in 1959 over 1958 by approximately 6.5 per cent, these increases varied considerably in the nine geographic divisions of the country. For the first ten months of 1959 the New England region was up 16 per cent, the West South Central and Pacific regions gained 14 per cent, but the Middle Atlantic and West North Central states were up only 8 per cent. The remaining divisions showed increases of 11 or 12 per cent.

Franchised car dealer sales started on the upgrade with the introduction of the 1959 model cars. In September of 1958 sales were down to the lowest point in several years and they amounted to \$1,929 million. October of that year saw the first increase in several months bringing sales volume up to \$2,055 million. From there on monthly sales increased steadily until they reached \$3,198 million by June of 1959. July, August and September recorded more than seasonal declines, but were still far above sales for the similar months of 1958. It is fully expected that car dealer sales for the year will be in the neighborhood of \$34,000 million, an increase of 24 per cent over the year 1958.

Service Stations Growing

The gasoline service stations are growing in stature from the service repair point of

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Monthly Sales of Franchised Car Dealers

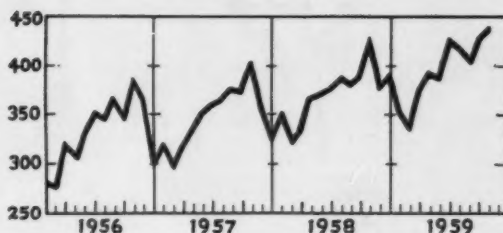
(In Thousands of Dollars)

	1959	1958	% Gain
Jan.....	\$ 2,531,000	\$ 2,357,000	7.38
Feb.....	2,450,000	2,073,000	18.19
Mar.....	2,921,000	2,297,000	27.16
Apr.....	2,942,000	2,384,000	23.41
May.....	3,033,000	2,489,000	21.86
June.....	3,198,000	2,446,000	30.74
July.....	2,903,000	2,308,000	25.78
Aug.....	2,772,000	2,212,000	25.32
Sept.....	2,305,000	1,929,000	19.49
Oct.....	2,956,000	2,055,000	43.84
Nov.....	—	2,205,000	—
Dec.....	—	2,618,000	—
Total—10 Mos.	\$28,011,000	\$22,550,000	24.21
Total—Year*	\$34,000,000	\$27,373,000	24.00

* Estimated for 1959.

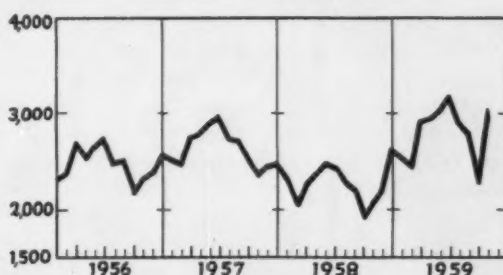
Sales of Automotive Jobbers Incl. Tire & Tube Wholesalers

(In Millions of Dollars)



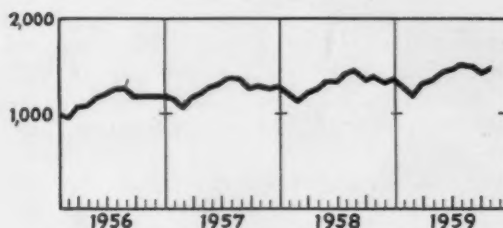
Sales of Franchised Car Dealers

(In Millions of Dollars)



Sales of Gasoline Service Stations

(In Millions of Dollars)



Monthly Receipts of Gasoline Service Stations

(In Thousands of Dollars)

	1959	1958	% Gain
Jan.....	\$ 1,282,000	\$ 1,209,000	6.04
Feb.....	1,197,000	1,122,000	6.69
Mar.....	1,318,000	1,214,000	8.57
Apr.....	1,348,000	1,252,000	7.67
May.....	1,427,000	1,325,000	6.89
June.....	1,450,000	1,331,000	8.94
July.....	1,516,000	1,410,000	7.52
Aug.....	1,504,000	1,448,000	3.87
Sept.....	1,419,000	1,346,000	5.42
Oct.....	1,462,000	1,384,000	5.63
Nov.....	—	1,338,000	—
Dec.....	—	1,369,000	—
Total—10 Mos.	\$13,923,000	\$13,051,000	6.68
Total—Year*	\$16,840,000	\$15,758,000	6.87

* Estimated for 1959.

New Registrations of Imported Cars and Trucks

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	Cars	% of Total	Trucks	% of Total
1950.....	16,336	0.27	353	0.03
1951.....	20,828	0.41	251	0.03
1952.....	29,299	0.70	292	0.03
1953.....	28,961	0.56	276	0.03
1954.....	32,403	0.59	448	0.05
1955.....	58,465	0.82	2,227	0.23
1956.....	98,187	1.65	5,460	0.61
1957.....	206,827	3.46	15,262	1.95
1958.....	377,839	8.12	28,435	3.91
1959*....	605,000	9.70	36,000	3.89

* Estimated on basis of 9 months total.

view. Not only are they increasing in numbers, but also in physical size. The small curbstone station is rapidly disappearing and being replaced by stations equipped to provide repair service on cooling systems, brakes, front-ends, steering, engine tune-ups, electrical systems, transmissions, universal joints, differentials and engines. They are advertising to the public that they have a qualified mechanic on duty at all times. Their receipts from the sales of gasoline, oil, lubricants, washings, and repair services have increased from \$10.7 billion in 1954 to an estimated \$16.8 billion in 1959. Over 1958 their receipts increased nearly 7 per cent as will be seen in the table of monthly sales in 1959 compared with 1958.

Three entirely new cars were introduced for 1960, the Corvair, Falcon and Valiant. These three new cars will mean new tools, new parts and new equipment for the manufacturers to make and for the wholesaler, car dealer, and service outlets to stock.

Car Production Up

Passenger car production during 1959 increased by about 31 per cent with all makes of cars registering substantial gains over 1958. American Motors was up 85 per cent, Chrysler Corp. 26, Ford Motor Company 43, General Motors 17 and Studebaker-Packard Corp. by 174 per cent. If production had not been curtailed due to lack of steel, it is quite probable that total U.S. passenger car production could have been close to 6,000,000. However, due to forced layoffs it now appears that production will be in the neighborhood of 5.4 or 5.5 million. Trucks are showing a substantial increase of 32 per cent and should

end the calendar year with about 1,100,000 produced.

Imported Cars

Car imports for 1959 will approximate 605,000, up 60 per cent from the 377,839 new registrations of imported cars during 1958. These imported cars will be about 9.7 per cent of total U. S. new car registrations as compared with 8.12 per cent in 1958 and only 0.82 per cent five years ago.

Imported trucks are now taking about 3.9 per cent of the new truck registrations. They will number approximately 36,000, up 8,000 over 1958 and far in excess of the 353 new imported trucks registered in 1950.

If we can overlook the threatened railroad strike, then 1960 will be a banner year. Gross National Product will approximate 500 billion dollars. The Index of Industrial Production should show an average for the year at around 160 to 165. It is conceivable that Personal Income will climb to \$390 billion and Retail Sales will end the year with a monthly average of around \$18,500 million. These advances will be sharp during the first half of the year, but will level off in the latter half.

All these general economic conditions will have a lifting effect on the automotive service industry. Production of conventional passenger cars might well reach close to 6,000,000 units. In addition, we may expect production of the compact cars to be in the neighborhood of about 700,000. Imports of foreign cars will do well to maintain the level of 1959 at around 600,000 units. Truck production will be slightly higher than 1959 with about 1,200,000 coming off the assembly line. Total registration should show an increase of two to three per cent.

As conditions appear now 1960 should be an excellent year for the vehicle manufacturer, the parts and equipment manufacturers, the automotive wholesaler, the car dealer and the repair service stations.

Recollections



McQuay-Norris Mfg. Co. Marks 50th Anniversary

Early in the 1900's, two friends, Louis E. McQuay and William K. Norris, were embarked on their own separate careers. McQuay was Superintendent of the Maintenance Department of the local Street Railway Company and Norris was a sales representative for a large meat packing company. McQuay had developed a two-piece piston ring which he explained to his friend, Norris, had greatly improved the compression on air compressors used for the braking of street cars.

Bill Norris, with his sales imagination, visualized its possibilities in the new horseless carriages then appearing in greater numbers. In 1910, after selling an older mutual friend on investing \$20,000.00, the McQuay-Norris Manufacturing Company was formed and started to manufacture the revolutionary "Leak-Proof" piston ring in a small store in Chestnut Street in St. Louis which the two friends rented. McQuay manufactured the rings and Bill Norris "tended the counter," selling them directly to car and truck owners to keep the business running, and at the same time contacting and selling acces-

sory wholesalers on distributing them to their garage customers.

A year or so after the company was founded, George Buzby, one of the founders of the Chilton Co., the sole space salesman in the United States for the old Cycle and Auto Trade Journal, got wind of these two fellows who were trying to sell a new automobile part, and smoked them out as a possible advertising prospect.

He was successful in selling Bill Norris on placing the company's first ad (borrowing money to do so) which appeared in Buzby's magazine in 1912. The second ad appeared in Motor Age on January 9, 1913.

From these humble beginnings, McQuay-Norris through the years developed a complete line of engine and chassis parts, distributed through several thousand recognized automotive wholesalers throughout the world, and is this year celebrating their 50th milestone as a leader in our industry.

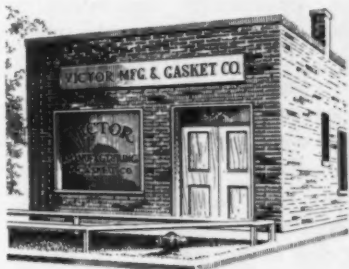
Victor's Golden Years

Fifty years ago, John H. Victor together with his brother Joseph had an idea for building a better gasket than

was available at the time. Both were skilled as tool and die makers and they had the manufacturing know-how.

That was in 1909. And that's how the Victor Manufacturing & Gasket Company was born in a shop in an apartment house in Chicago.

The photo shows the first Victor factory into which the business moved from its original basement shop quarters.



As the automotive industry gathered momentum, the Victor company founders became its major supplier of gaskets.

While automobile manufacturing boomed, new markets across the country opened for Victor.

Victor's 50-year history is one of steady growth and expansion. Victor today produces over 100,000 sealing items—all varieties of gaskets, oil seals, packings and mechanical seals. They are marketed the world over.

a compression test and still others make a cylinder balance test. In any case the first step is to determine the physical condition of the engine before proceeding with the other steps in a logical tune-up procedure.

It's impossible to tune an engine when the compression is off on any one cylinder. It becomes even more critical when you tune an engine with four or less cylinders. On a two cylinder engine with one burnt exhaust valve, you automatically loose 50 per cent of your power. On a four cylinder engine with one burnt exhaust valve you'd loose 25 per cent of your power. So, as the number of cylinders increase the less effect a bad cylinder would have on engine operation. Regardless of the effect a bad cylinder has on the operation of an engine, you can see that any loss of compression makes tuning an engine practically impossible. Tune-up means resorting the engine to the same power output that it had when new. This is done by setting all adjustments back to where the factory specifications require them to be. Also replacing mechanical, fuel and electrical components that have worn due to normal use in any car.

Make sure that the cylinders balance out compression-wise. Compression pressure should be 113 to 120 psi. The next step is to torque the cylinder head to 43 ft. lbs. Torque the rocker shaft assembly bolts to 22 ft. lbs. Next lash the valves while cold to .0039 in., for the intakes and .0059 in., for the exhaust. Replace rocker cover gasket and cover. Tighten manifold nut to 18 foot pounds.

Electrical

Remove spark plugs, clean and set gaps at from .024 to .028 thousands of an inch. Check the distributor cap for any sign of high tension voltage leakover.

Examine ignition points for pitting. If badly pitted, they should be replaced. The ignition components are S.E.V. type made in France. Many domestic jobbers are now carrying these components in stock. It will pay you to check with your local jobber or local Simca dealer on supplying you with these items.

Distributor rotation is clockwise with a four lobe cam. Dwell angle is 56 degrees, plus or minus one degree. Contact gap is set at from .017 to .019 thousands of an inch. Condenser capacity is .28 microfarad. Timing is set 4 degrees BTDC., on the Flash engine and Zero degrees on the Flash Special. Total automatic advance is 48 degrees crankshaft travel on the Flash and 44 degrees on the Flash Special. Ignition timing marks are located on the crankshaft pulley.

The negative post of the battery is grounded. The Simca uses a 12 volt system. Conventional battery maintenance is all that is required. Clean and tighten terminals after checking battery condition of charge. Apply a coating of some anti-corrosive compound to the terminals for protection. Always remember to wash and dry the top of all 12 volt batteries, to eliminate the voltage leak-over across the top of the cells. Twelve volt units are more sensitive to acid-moisture leak-over of voltage than the six volt units.

The generator control is similar to that of any American three unit regulator. In checking control unit, use the conventional meter hook-up and make sure that battery specific gravity is not less than 1.180. Check for voltage drop on the ground and insulated side of the charging circuit with 10 amperes flowing in the circuit. The voltage drop on the insulated side should not exceed .50 volts. Regulator is adjusted by bending the flat steel

spring hangers up or down to change the settings.

Voltage regulator, warm—14.3 volts, 70 degrees F.

Current regulator, warm—18 amps at 15 volts—2700 rpm., Max.

Cut-out regulator, warm—0 to 6 amps., reverse current.

Cut-out Regulator, warm—Closing voltage, 13.0 to 13.75 volts.

The carburetor is a Solex unit using a "Auto-Starter" type choke. This unit functions like our automatic choke, except they don't use a butterfly valve to restrict the entrance of air into the engine. The "Auto-Starter" thermostatically opens or closes a rotary type valve that connects a metered jet to a vacuum passage below the closed throttle valve. The closed throttle valve acts to restrict the entrance of air and also with the engine cranking effects a high vacuum below the valve. Literally, gasoline is drawn directly from the float bowl through the starter jet and connected to a vacuum passage by the "Auto-Starter" directly into the manifold, thus giving a rich mixture for starting purposes. The only adjustment required is that the three dots on the thermo coil housing must be lined up. No other adjustment is required. The thermostatic spring varies the control seasonally. The normal slow speed idle screw mixture adjustment is provided at the throttle valve in addition to the normal idle speed adjustment screw. The float level is non-adjustable.

Two deaf-mutes were having an argument. When a friend came around to smooth things out, one of the mutes was standing with his back to the other, laughing uproariously.

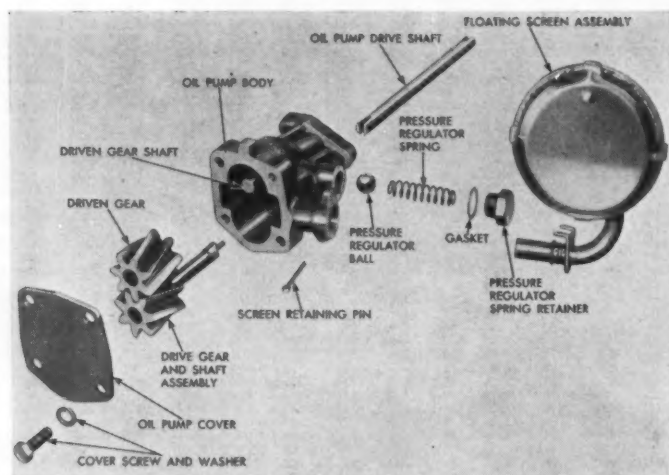
Said the friend, talking with his fingers:

"What's the joke? Why is Jim looking so angry?"

"Oh," signaled the mute happily. "He wants to swear at me and I won't look."

1959 New Passenger Car Registrations*

STATE	Buick	Cadillac	Chevrolet	Chrysler	De Soto	Dodge	Edsel	Ford	Imperial	Lincoln	Mercury	Oldsmobile	Plymouth	Pontiac	Rambler	Studebaker	All Others	Total	
Alabama.....	Oct. 359	125	2079	72	34	299	48	2098	15	23	163	560	389	512	378	272	789	9084	
10 Mos. 2990	1063	15311	572	308	1862	524	18116	187	182	1467	3740	3369	3885	3100	2998	1129	86350		
Alaska.....	Oct. 10	9	49	4	2	1	9	87	2	1	9	11	48	19	12	11	81	363	
10 Mos. 83	81	769	45	31	35	36	900	21	20	108	104	393	142	251	153	828	4000		
Arizona.....	Oct. 100	88	831	33	11	130	12	622	16	31	117	216	182	242	139	83	542	3405	
10 Mos. 1085	878	8082	245	164	770	247	7562	125	231	959	1735	1870	2221	1675	795	4253	32877		
Arkansas.....	Oct. 157	64	1093	24	17	138	17	1111	8	9	117	230	227	283	120	70	239	3924	
10 Mos. 1475	649	10792	287	287	913	265	10240	58	105	1047	2239	2086	2308	1780	648	2264	37333		
California.....	Oct. 1963	1658	11215	468	281	1520	241	11744	292	286	1490	3108	3124	3208	3415	1874	8714	54243	
10 Mos. 16056	15016	110674	3980	2994	11472	2779	111354	1535	2619	11659	23958	26148	27082	33504	11063	82590	507111		
Colorado.....	Oct. 209	122	1600	62	39	176	45	1230	14	30	178	329	294	320	311	119	474	5582	
10 Mos. 1771	959	13833	493	298	1463	408	12697	151	242	1417	2640	2670	3127	3411	1006	5234	51468		
Connecticut.....	Oct. 257	274	1206	122	76	216	41	1945	26	43	217	507	743	888	672	245	1371	8551	
10 Mos. 2174	1742	14598	1011	587	1693	344	16313	238	348	1704	4212	6326	4682	5963	1870	11081	74857		
Delaware.....	Oct. 85	59	491	21	17	55	14	402	5	4	48	110	154	138	66	35	235	1835	
10 Mos. 625	368	3900	167	154	468	113	3472	33	54	399	853	1486	999	638	284	1844	15917		
District of Columbia.....	Oct. 91	77	460	20	10	58	12	437	9	13	68	159	149	182	106	47	322	2222	
10 Mos. 595	693	4694	318	152	534	101	4482	78	128	417	1383	1722	1617	1278	478	2902	21536		
Florida.....	Oct. 702	623	4512	151	73	449	90	4119	120	118	360	1166	946	1067	1170	243	3200	19109	
10 Mos. 6626	6238	41856	1402	832	3151	974	37160	702	1276	3604	9234	9684	8978	8849	2917	37178	179291		
Georgia.....	Oct. 355	166	2294	70	34	253	64	2184	18	19	165	530	512	661	271	156	956	8708	
10 Mos. 3513	1748	24717	808	491	1877	798	25051	175	317	1713	5038	5485	7029	3831	1591	10235	94287		
Idaho.....	Oct. 101	45	354	20	13	53	14	358	5	15	52	126	82	124	86	52	125	1658	
10 Mos. 968	642	4514	182	134	515	143	27847	60	85	52	1062	1062	1415	1481	526	1230	18208		
Illinois.....	Oct. 1865	954	9911	329	196	901	199	7240	108	177	1000	2895	1728	3144	1680	675	1781	33794	
10 Mos. 16796	9430	95513	3703	2405	7424	2762	83028	1053	2087	8303	25768	20287	28337	20106	6100	17821	353803		
Indiana.....	Oct. 891	358	4023	165	113	536	107	3425	63	62	428	1427	882	1285	747	607	720	15819	
10 Mos. 7905	3263	39643	1522	1473	4216	1465	37961	451	625	4005	12883	9911	11879	8732	6889	7771	100584		
Iowa.....	Oct. 357	170	2560	98	45	251	27	2222	26	21	268	524	458	596	430	151	349	8553	
10 Mos. 3295	1262	22609	891	546	2179	579	22058	165	211	2407	4812	4967	5199	4862	1735	3485	87156		
Kansas.....	Oct. 351	122	1453	63	37	212	46	1896	16	21	163	187	149	182	106	47	322	2222	
10 Mos. 3070	1610	19494	645	375	1787	480	17081	148	220	1537	4107	3984	4133	3619	1281	4421	56783		
Kentucky.....	Oct. 313	111	1554	49	24	212	53	1398	10	10	151	478	407	430	277	113	422	6012	
10 Mos. 2963	878	14748	449	306	1412	582	14810	97	119	1417	4083	3588	3859	2732	893	3664	56210		
Louisiana.....	Oct. 338	189	2445	43	47	209	46	2229	28	33	229	597	368	603	107	112	823	8514	
10 Mos. 2827	1420	23391	486	389	1289	502	20319	153	274	1581	4863	3214	5082	2417	1080	7738	77165		
Maine.....	Oct. 767	344	693	26	9	71	29	471	2	10	77	117	193	146	174	62	342	2567	
10 Mos. 761	569	9570	223	119	653	238	5287	38	88	607	976	1816	1310	1688	790	3266	23884		
Maryland.....	Oct. 144	98	2148	97	77	338	46	1754	26	31	218	570	779	816	444	190	8843	16554	
10 Mos. 2775	1583	22785	1038	748	2615	417	20995	212	302	1814	4684	7763	4882	5296	1822	9438	88740		
Massachusetts.....	Oct. 557	333	3299	144	119	447	63	2981	39	63	359	962	1157	831	1131	253	1546	14364	
10 Mos. 4582	2706	26350	1573	1205	3425	752	29185	362	636	2968	8316	10699	6779	11087	2393	13978	126989		
Michigan.....	Oct. 1890	803	6384	262	161	1207	277	9348	196	235	1308	2951	2081	3334	1847	475	1614	36445	
10 Mos. 17237	7737	87812	2814	2833	8191	3939	91994	860	1929	12482	23345	21802	28118	17667	4924	17648	351312		
Minnesota.....	Oct. 604	243	2616	113	62	314	58	2699	31	34	285	745	790	778	680	287	586	11309	
10 Mos. 4868	1842	26489	2771	944	3564	2771	944	3564	2771	944	3564	2771	944	3564	2771	944	3564	106137	
Mississippi.....	Oct. 135	41	894	22	17	53	15	654	6	4	49	227	182	193	85	53	225	2945	
10 Mos. 1514	468	9823	313	169	563	184	8383	49	90	589	2024	1903	2092	1186	588	2788	32726		
Missouri.....	Oct. 519	239	3706	85	79	380	57	3337	23	26	241	776	761	855	586	190	945	12737	
10 Mos. 5134	2335	36888	924	756	3420	775	31605	214	364	2314	7076	7794	7267	6777	2338	9405	125386		
Montana.....	Oct. 87	51	439	25	18	85	9	428	18	7	74	110	120	133	88	65	126	1893	
10 Mos. 1114	488	5278	233	143	673	211	4078	89	72	71	1275	1441	1226	1347	614	1361	21155		
Nebraska.....	Oct. 37	126	1278	32	12	88	9	1242	26	31	218	570	779	816	444	190	8843	16554	
10 Mos. 1679	842	12678	509	252	1084	278	12902	147	121	1245	2642	2751	2512	2358	988	2365	45572		
Nevada.....	Oct. 30	41	182	4	9	25	9	153	1	8	29	42	52	78	40	13	708	1004	
10 Mos. 282	274	1431	60	62	173	86	1503	36	88	282	420	379	541	401	185	1989	8182		
New Hampshire.....	Oct. 42	25	409	17	6	28	11	229	3	2	40	68	89	118	34	249	1465		
10 Mos. 458	312	4279	160	94	497	163	3694	31	63	492	792	1300	944	1555	572	2416	17712		
New Jersey.....	Oct. 1009	832	4133	329	145	733	92	4487	160	100	550	1456	1334	1742	1109	508	2141	20561	
10 Mos. 6387	4218	33681	1193	5113	1861	40914	5887	1675	4818	11523	14047	11523	14047	11523	14047	11523	14047	181558	
New Mexico.....	Oct. 155	63	779	37	14	77	32	773	12	8	89	183	183	201	104	88	237	3025	
10 Mos. 1152	489	6839	254	135	651	203	6080	77	94	607	1421	1444	1553	1133	625	2372	25109		
New York.....	Oct. 2010	1647	10571	603	302	1587	196	9506	254	172	1249	4015	3280	3836	2334	1043	5122	47917	
10 Mos. 16225	13732	93600	6282	3772	11079	2204	66716	1677	2229	10450	33018	32825	31138	29967	10046	45574	427534		
North Carolina.....	Oct. 487	179	2622	108	81	314	63	2443	18	24	261	561	578	649	287	195	1177	10047	
10 Mos. 4263	1716	23787	941	687	2180	748	27647	149	247	2198	5400	6181	6019	3419	1737	10422	97730		
North Dakota.....	Oct. 14	96	622	30	16	90	16	181	4	5	73	143	148	145	81	39	114	2145	
10 Mos. 744	264	4748	292	170	625	251	5122	56	54	635	1211	1591	985	1060	292	580	18837		
Ohio.....	Oct. 1778	697	7923	304	221	1501	229	7791	162	134	1077	2506	2042	2790	1744	770	2619	34315	
10 Mos. 15501	6556	78064	3182	2784	10288	2821	82389	770	1127	9584	22107	21726	24233	18485	8867	25076	33274		
Oklahoma.....	Oct. 335	132	1877	48	35	134	26	1693	20	17	177	501	324	461	382	127	435	6814	
10 Mos. 2689	1233	18667	429	347	1126	263	16057	122	182	1512	4056	3078	4110	3126	1102	4256	62355		
Oregon.....	Oct. 88	40	606	21	29	81	24	575											



Exploded View of the Pontiac Oil Pump

'56 Pontiac Truck Loses Oil Pressure

I have a customer that has a 1956 G.M.C. truck, which has a 1956 V-8 Pontiac engine. Ever since it was new it's had trouble losing oil pressure at times, but not very often. It will happen driving 50 or 60. When he slows to idle, it will pick up the pressure again and will be all right, for an indefinite time. The truck has 1500 miles. I removed pan and oil pump and took pump all apart, but could not find anything wrong. Customer says, when pressure drops, bearings will knock.

Robert Timm,
Chappell, Nebr.

I WOULD suggest removing the oil pan to check the pressure regulator. Sometimes the pressure regulator ball becomes pitted, or the floating screen arm fits too loose, causing the system to suck air.

1959 Ford Makes Strange Noise at 30 mph

I'm confronted with the following problem. I have a '59 Ford V8, standard shift, with the 292 cubic inch engine. The car has 14,000 miles on it and performs well, but as soon as it reaches the speed of 30 mph or over it sounds as if the engine is in the front seat with you. I've

done the following things trying to get rid of this deafening drone; advanced and retarded timing as much as ten degrees each way, checked all motor mounts and exhaust mounts, putting rubber cushions where I could. I put a rubber cushion between the transmission mount and the cross member and this did do away with some of the noise, but still we can't drive much over 55 without being aggravated with this awful drone. I've tried engaging and disengaging the clutch with the throttle at the same setting and the noise doesn't seem to change much. As soon as the accelerator is released when you are moving, the noise goes away.

John F. Kaechele,
Elberta, Ala.

SINCE this noise disappears when releasing the throttle, it would indicate the engine or exhaust line is probably grounding somewhere. I would suggest loosening the motor and exhaust mounts. Then run the car back and forth so that the engine can center itself. Check the mountings carefully, and tighten.

1958 Olds Clatters When Foot Is Off Throttle

I have a 1958 Super Olds, with

for troubleshooting



BY JACK MONTGOMERY, TECHNICAL EDITOR

18,000 miles. When I gun it to 50 miles per hour, and suddenly take my foot off the throttle, I get a clattering noise. It sounds like valve springs. How can I correct this trouble? Any suggestions would be appreciated.

Michael Bonavoglia,
Brooklyn, N.Y.

THIS noise could be traced to several things, such as a broken diaphragm spring in the fuel pump, sticky valves or an engine loaded with carbon. To find just what is causing the noise will require checking these items individually.

1955 Olds Developed Knock After Valve Job

I have a 1955 Olds Super 88. Valve job was done at 55,000 miles. After running a few miles

it developed a noise, like a very loose tappet. Installed a new set of lifters. Clearance .050 and noise still persists. Can't hear it on idle. It is more noticeable when motor is under load.

Robert F. Gordanier,
Bentley, Mich.

FROM your description of this noise in a 1955 Oldsmobile, it would appear to me that either a piston or pin is causing this knock. I would suggest putting the engine under a load. Then short out the individual spark plugs. If noise can be deadened by this method, then it will be necessary to remove the heads and pistons for further examination.

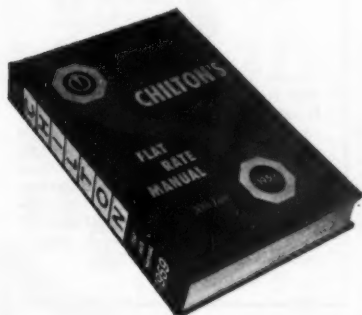
'51 G.M.C. Truck Has Vibration Problem

We have a vibration problem in a ½ ton 51 G.M.C. While driving on the road up to 40 mph. the truck runs perfectly. But after that the faster you drive the more the cab rattles and vibrates. While driving 60 mph. you push in the clutch and let the motor idle everything is nice and smooth. If you speed up the motor with the truck standing still you get the same result, lots of vibration. We have taken off the harmonic balancer and tried

a new one, but it did not help. We had the pressure plate and clutch off, but no help. We dial indicated the flywheel, but this runs within .005 limit. We jacked up the motor and checked all motor mountings. Motor does not contact frame. We tied exhaust pipe snug up to frame, but no help.

Louis Hansel,
Willmar, Minn.

SINCE this vibration is noticed when the engine is revved up, without pulling the wheels it must be in the engine itself. I would suggest disconnecting the fan belt to eliminate the possibility of bent fan blades. The only other thing it might be would be an unbalanced crank shaft, or possibly a twisted shaft. In this case to find the trouble the engine would have to be dismantled.



BODY SHOP TIPS



Opening Ford 1957-59 Hood Locks

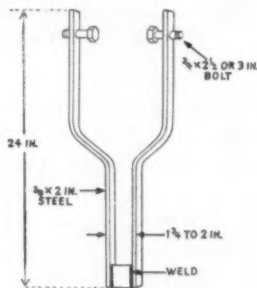
When the cable snaps on Ford hood locks while trying to open the hood, it is a problem to try to open the lock. Place a fender cover on right side of fender. Get a tire iron or flat piece of metal. Raise hood $\frac{1}{4}$ inch up in the corner near the window. Place a small block of wood underneath the hood to hold it in that position, so it doesn't scratch the paint. Get an ordinary three foot yardstick. With a searchlight, look at hood lever lock. Place ruler on lever. Then tap ruler with hammer. It will jump open without doing any damage. *Arthur Chirechui, Baychester Auto Repairs, 2939 Edson Ave., Bronx 69, New York City, N.Y.*

Taking Out Dents In Chrome Moldings

When a piece of chrome molding trim has only a slight dent or bulge, fix it fast by blocking off a short channel in the underside of the molding with wet rags or putty. Make the block as close as possible to the dented portion. Pour in melted lead. When cool, remove the rags or putty and tap the makeshift "dolly" of lead along to straighten out the dent. Leave the lead in place or melt it out carefully. *Stanley Clark, Box 2162, East Bradenton, Florida.*

Frame Clamp To Hold X-Type Chevy Frames

I have some frame clamps to hold the X-type frame when straightening on 58 and 59 Chevrolets. This type clamp has done the job for me on six major frame jobs very well. This is how



it is made. Take two pieces of $\frac{3}{8}$ x 2 x 24 inch steel. Drill a $\frac{1}{4}$ inch hole at one end of bar for both pieces. Now bolt to second jig hole from rear of drive line tunnel with $\frac{1}{4}$ inch bolt. Take torch and heat to form both pieces so that it will form a Y at narrow end. Weld piece of solid bar so chain can be put thru to either one of front presses of machine. *Bob Murra, Quality Chevrolet Co., 1525 E. Douglas, Wichita, Kan.*

36-inch Masker Is Mounted On Wagon

I recently purchased a new 36 inch masker. Our problem was just where to locate it. We used a coaster wagon, just bolted a

piece of sheet steel to the tip flange of the wagon, the same size as the base of the masker. Then we bolted the masker to the sheet steel. This is a real time saver. You can pull it right to the job, and the wagon is just the right height. This 36 in. masker can save a lot of time on two-tone paint jobs. *Willis Lo Goss, Eddies Body Shop, Logan Blvd., Burnham, Pa.*

Tool For Getting Dents Out of Radiator Tanks

A tool for getting out dents in radiator tanks and body metal. Melt old lead in about $2\frac{1}{2}$ lb. kettle to form a flat side ball. Drill a $\frac{1}{2}$ in. hole through center of ball. Use a $\frac{7}{16}$ in. steel overflow pipe 18 in. long for a shaft to slide weight on to use as a hammer. Use petcock boss from old radiator. Braze and solder to one end of pipe as a stop for the hammer. Use a flat bolt tin and solder to the other end of pipe. Solder bolt end to metal and use lead ball as a hammer to pull out dents. This will save a lot of time and lead. *James Campbell, Hovis Radiator Repair Co., 801 So. Church St., Charlotte, N.C.*

**BODY SHOP TIPS
are worth**

\$7.50

If you've developed an idea that has helped you to do body and fender work or painting better or faster, it may be worth money. Jot down the idea and, if necessary, make a rough sketch. Sometimes a snapshot will help. Just make the description of your BODY SHOP TIP clear, and if it is used, you'll receive a check for \$7.50.

\$7.50 **CAR and TRUCK** **shop kinks** **PAID FOR EACH KINK USED**

Cover Protects Wheel From Paint Spray

Harry J. Miller, 991 Forty-Second St., Sarasota, Fla.

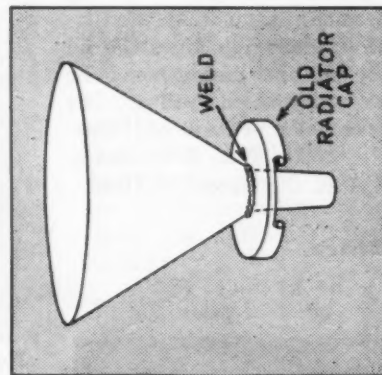
29. We make short work when spraying tire dressing (paint) on wheels without risking time-wasting cleaning afterwards or other masking, by making up a metal wheel cover to fit over 14, 15 and 16 inch wheels. The edge of disc is turned over to make a small shoulder, and a pint can is soldered in the center of the disc. Simply pull the hub cap, hold the disc against the wheel and spray.



How To Make A Funnel That Will Set Straight On Radiator

Vincent J. Andronaco, 76 Forest St., New Canaan, Conn.

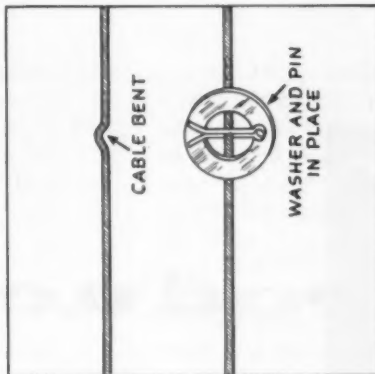
31. Funnel for installing antifreeze never seems to stand straight in radiator. I have made a funnel that will set on a radiator straight. I took an old radiator cap, and took off all the seal unit leaving just the cap shell. I drilled an inch hole in the cap shell, installed a funnel about 5 inches in diameter. Slipped the cap on funnel spout and soldered together, making a very good funnel for installing antifreeze.



How To Take Up Slack In Windshield Wiper Cables

R. Keefer, Keefer Motor Co., Madisonville, Texas

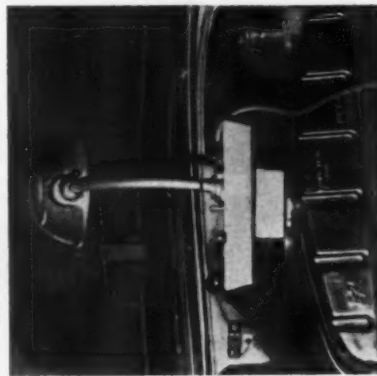
30. This is my shop kink to take up slack in windshield wiper cables. Locate open place for movement that will not contact other parts in movement under dash. Take needle nose pliers, and put a bend in the cable. Then place flat washer over bend and pull the loop through washer with an ice pick, enough to insert a cotter pin and open ends of pin. This makes a light weight permanent repair.



Handy Light And Tool Tray

Henry Nelson, c/o United Electric Service, Fargo, N. Dak.

32. Here is what I use to get plenty of light and a place for tools and small parts when I tune-up cars. The bread pan is nailed to the block of wood which is a spacer, so assembly can be put on almost any radiator. The lamp fastens in with a long bolt, which allows light base to turn in pan. Radiator cap fastens to block with 2 wood screws.



new **p**roducts

THERE'S PROFIT IN THESE ITEMS FOR YOU

Service Kit

Includes ring sizes of bolts and nuts

Dorman Products Inc.: A new service kit of battery holddown bolts and nuts, has just been announced. No. SK36 includes nine sizes of bolts (with nuts) from $\frac{5}{16}$ " x $5\frac{3}{4}$ " to $\frac{3}{8}$ inch x 10 inches for Chevrolet, Ford and Chrysler Products. All items available for refill in standard packages of twenty-five. A diagram showing application, part number and location of each item lines the lid of the orange metal box. For more information write: Lee Dorman, Vice-President, Dorman Products Inc., 5757 Mariemont Ave., Cincinnati 27, Ohio.

Oil Filter

Keeps sludge and dirt in filter

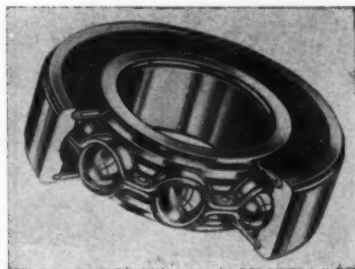


Salem Filter Division, Champion Laboratories, Inc.: New spin on Sludglok filters, it is claimed, will prevent by-passing of sludge back into the crankcase. With the new Sludglok, the company

states, the oil cannot pass over the dirty filter element because the bypass valve (patent applied for) is at the front end of the filter. The Sludglok keeps all the sludge and dirt in the filter where they are caught and only clean oil can get back into the engine, it is stated. For more information write: Champion Laboratories, Inc., Salem Filter Div., West Salem, Ill.

Ball Bearing

Lubricated-for-life sealed ball bearing



New Departure Division of General Motors: A versatile and widely used lubricated-for-life sealed ball bearing is announced. The Senti Seal is of molded rubber construction and contains a hardened flat steel insert for control and stiffness. The seal fits into a cup groove giving a fluid type joint without creating any measurable outer ring distortion. The seal lip is designed for positive contact on a specially prepared inner ring notch. Senti

Seals are available in most ND single row, non-loading groove bearing types, also in small double row bearings. For more information write: General Motors, New Departure Div., Bristol, Conn.

Portable ACilloscope

Checks spark plug condition

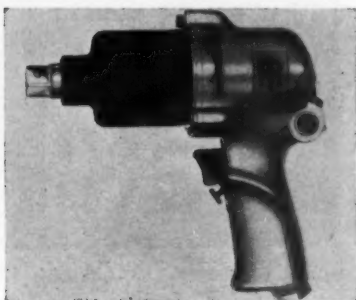


AC Spark Plug, Division of GM: An electronic device that permits motorists to check spark plug efficiency is being marketed. The instrument, called the ACilloscope, is said to be able to detect lead fouling, the cause of many spark plug failures. In addition, the device reveals electrode wear, oil and gas fouling, cracked insulators and other spark plug malfunctions that can cause plug failure. It is portable, weighing $2\frac{1}{2}$ pounds, and can be connected to an engine in less than 30 seconds, AC engineers say. It checks efficiency by measuring the voltage required to fire the spark plugs when the engine is running. All the plugs in the engine

are analyzed at the same time. For more information write: W. J. Oldfield, Dir. of Adv. & Promotion, AC Spark Plug Div., GM Corp., 1300 N. Dort Highway, Flint, Mich., or phone, CE 4-5611.

Impactool

Handles nut running jobs on cars, trucks



Ingersoll-Rand Company: The new size 407 Air Impactool, for automotive service work has been announced. Tool features 25 per cent more power and uses 45 per cent less air than the tool it supersedes. In addition, it is $4\frac{1}{2}$ times faster, $3\frac{3}{16}$ inches shorter and $2\frac{3}{8}$ pounds lighter than the previous model. The 407 Impactool is equipped with a sturdy steel hammer case. With the power-to-weight ratio of the 407 Impactool, company states that mechanics will find that it will capably handle a multitude of nut running jobs on everything from passenger cars to medium trucks. For more information write: Herbert D. Kynor, Jr., Adv. Div., Ingersoll-Rand Co., Memorial Parkway, Phillipsburg, N.J. or phone GL 4-2121.

Touch-up Paints

Line of matching car colors offered

Plasti-Kote Inc.: A complete line of aerosol touch-up paints to

match 1957, 1958, 1959 Ford, Chevrolet and Plymouth cars is offered. Car Colors are available in over 300 colors to duplicate the original color of the car. These Car Color aerosol paints are offered in 8 oz. cans with large over-caps which match the contents of the can. The caps are printed with stock number and color and the cans are also coded on the bottom for proper identification if cap is misplaced. Car Colors dry fast and can be used on any surface, company states. For more information write: Plasti-Kote, Inc., 9801 Harvard Ave., Cleveland, Ohio.

Brake Shoe Sets

Aid for brake service business



Grey-Rock Division of Raybestos-Manhattan, Inc.: Company offers a new, specially priced 6-set "Sales-Maker" consisting of six single-axle sets of brake shoes lined with Grey-Rock Balanced Brake Linings for late model Chevrolets, Fords and Plymouths: a 5-piece brake tool kit containing basic tools needed for brake service, in a plastic case; 4 ounce tube of brake lubricant. Also an attention-getting curb sign to let car owners know the dealer is in the brake service business; a package of advertising material containing the lat-

est Grey-Rock Brake Service Manual, posters, and mailing pieces. For more information write: S. R. Robinson, Adv. Mgr., Grey Rock Div. of Raybestos-Manhattan, Inc., Monheim, Penna., or phone MO 5-2217.

Dual Purpose Tool

Combination valve seat inserter and valve guide reamer

Hall-Toledo, Inc.: A new dual purpose Model MP Valve Seat Inserter—Valve Guide Reamer is being marketed. It has been developed to counterbore the head or block for the installation of a new valve seat ring. From the same setting of the tool, it can ream valve guides oversize to the engine manufacturers specifications or coredrill and finish ream for new valve guide bushings. Features included in this dual purpose tool are expandable cutters, spinner and clearance blades, automatic feed for depth of counterbore, and capability of operating at extreme angles up to 45 degrees from the gasket face. For more information write: Charles W. Bossel, Asst. to the Pres., Hall-Toledo Inc., 2931 South Ave., Toledo 9, Ohio, or phone EVergreen 5-2519.

Mixing Service

Enables shops to duplicate color of acrylic finishes



Ditzler Color Division of Pittsburgh Plate Glass Co.: To enable dealers and paint shops to match
Continued on page 72

NEW PRODUCTS . . . CONTINUED

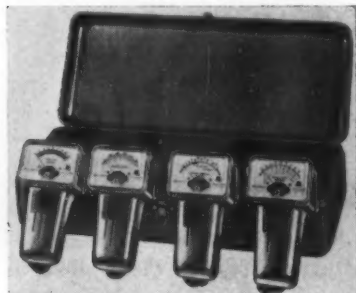
"THERE'S PROFIT IN THESE ITEMS FOR YOU"

all of the acrylic colors, the company has introduced a new series of Duracryl Acrylic base colors and hundreds of laboratory tested formulas are available, according to the company. This unit enables the shop to duplicate the beauty and depth of color, high gloss and outstanding durability of acrylic finishes. This mixing service, states the company, provides the means for shops to prepare the amount needed, when needed, for a section repair or complete refinish job, without waiting or waste. For more information write: Neil W. Vogt, Sales Promotion Mgr., Ditzler Color Div., Pittsburgh Plate Glass Co., 8000 W. Chicago Ave., Detroit 4, Mich., or phone WE 3-7903.

Analyzing Set

Contains four hand-size testers

Harvey E. Hanson Company: A complete portable motor analyzing set in a metal case has been introduced. Consists of model 31, four chrome plated hand-size testers, which incorporate $3\frac{3}{8}$ x



$2\frac{3}{8}$ inch color-coded dial, instruction placard on top of case,

thumb-operated controls, fold over hook for hanging, and color-coded clips. Set includes model 26 tachometer, model 27 dwell angle tester, model 28 amp-volt generator-regulator tester and model 29 ignition tester. For more information write: Harvey E. Hanson, President, Harvey E. Hanson Co., Lake Blvd. & Commercial St., Paw Paw, Mich.

Flexible Heater Hose

Replaces molded curved heater hose connections

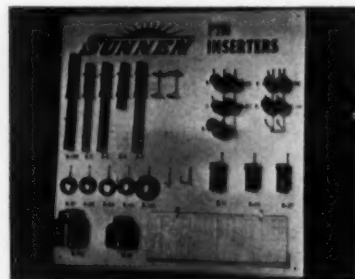


The Gates Rubber Company: A new type of heater hose has been introduced. It makes it easy to service cars requiring replacement of molded curved heater hose connections, states the company. This flexible heater hose features a special convoluted design, similar to flexible radiator hose, which enables it to bend without collapsing. This makes it possible for the hose to replace connections where molded curved hose was formerly required. It is manufactured in six foot lengths, in both $\frac{5}{8}$ and $\frac{3}{4}$ inch inside diameters. The hose cover is of tough, black rubber, and is heat

and weather resistant. For more information write: George Eylar, Customer Service, A & H Sales, Gates Rubber Co., 999 South Broadway, Denver 17, Colorado.

Pin Inserter Set

Handles cars and light truck press fit type rods



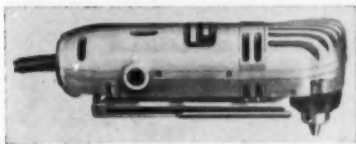
Sunnen Products Co.: A new Pin Inserter Set (B-500), has been introduced. It has a wall-mounted storage board for easy selection. Manufacturer states this set will handle all passenger car and light truck press-fit type rods including those used in the '59 engines. New B-180 Set handles latest International Harvester Truck Engines V226, V304, and V345. For more information write: C. E. Thorup, Adv. Mgr., Sunnen Products Co., 7910 Manchester Ave., St. Louis 17, Mo., or phone STerling 1-2100.

Compact Drill

Designed for close quarter drilling jobs

Black & Decker Mfg. Co.: A new version of company's "Shorty" drill, incorporating a 60 per cent increase in power and a 15 per cent reduction in weight, has been added to line of electric tools. New $\frac{1}{4}$ inch "Shorty" incorporates several new design features. One is an offset design

of the chuck head which facilitates working in confined space and around corners and permits finger clearance on flush drilling hobs. This allows maximum operator control and pressure. The new "Shorty" is equipped with a full-length paddle switch which enables the operator to maintain start-and-stop control in any



gripping position, company states. For more information write: J. F. Apsey, Jr., Public Relations Dir., The Black and Decker Mfg. Co., Public Relations Dept., Towson 4, Maryland, or phone VALley 3-4400.

Exhaust Removal Systems

*Dual inlet floor
receptacle featured*

National System of Garage Ventilation: Designed especially for the National Series "H" concealed tube, exhaust removal kit, this new dual inlet, it is said provides lower installation costs, as one inlet can serve two cars. Spur size for the dual inlet is 10 inches. Made of high tensile aluminum alloy, it is non-rusting, non-corrosive and non-sparking. The twin doors work independently and lay flat on floor when inlet is in use. For more information write: Frank M. Tenney, President, National System of Garage Ventilation, 138 West Williams St., Decatur, Ill.

Metrie Wrench Set

*Contains five
open-end wrenches*

Lectrolite Corp.: A set of open-

end metric wrenches, No. 45MS, has been introduced. Set No. 45MS contains five wrenches, with openings of 8 mm x 9 mm, 10 mm x 11 mm, 12 mm x 13 mm, 14 mm x 15 mm and 16 mm x 17 mm. Wrenches are nickel-chrome plated and have polished heads. They are precision milled and tempered. The new 45MS bore are for work on European cars, motor scooters, bicycles and machinery. For more information write: A. T. Topping, Sales Mgr., Lectrolite Corp., Defiance, Ohio, or phone 3-2065.

Compression Tester

*Gage for checking valve
and cylinder conditions*



Frank N. Wood Co.: A Compression Tester consisting of a durable, well constructed gage for checking valve and cylinder conditions has been introduced. The full 2½ inch dial carries large easy-reading numbers, which are calibrated to 300 lbs. It is designed for easy handling and use on cylinders of all cars except those where special long stems are required, company states. Extension stems, curved for easy use with the engine involved, are available as accessories for use with certain Ford, Chrysler, Chevrolet, Hudson, Nash, Studebaker and Packard engines. For

more information write: Frank N. Wood Co., 344 W. Main St., Wauskeha, Wisc.

Automotive Paint

*Dries quickly to a
hard, deep black finish*

Auto. Finishes Div., Acme Quality Paints, Inc.: The development of #75 Diamond Black, a high-gloss, high-quality black automotive paint has been announced. It dries quickly to a hard, deep black finish and sprays on easily. Paint offers excellent build, gloss retention and outdoor durability, company states. It works equally well for repair work or overall refinishing on both passenger and commercial vehicles. For more information write: Lawrence J. O'Doherty, Dir. of Sales, Acme Quality Paints, Inc., Automotive Div., 8250 St. Aubin Ave., Detroit 11, Mich., or phone TR 2-4800.

Wheel Bearing Cabinet

*Contains all necessary
stock and tools*



Federal-Mogul Ser., Div. of Federal-Mogul-Bower, Inc.: Bower-BCA bearing cabinets are being introduced. All necessary stock and tools are in one compact package. Mechanics can turn out a professional job, the company

Continued on page 80

after you have made every effort to collect it. Just how far you go to collect depends a great deal on sound business judgment. It isn't always necessary to take a debtor to court.

If you can show that even if a lawsuit were won you would still be unable to collect, then it would be foolish to throw good money after bad by taking the debtor to court. It is not necessary for the entire debt to be uncollectable. You are permitted to claim a deduction for a partially worthless business debt where it can be shown that the debt is recoverable only in part.

Treatment of Bad Debts on Your Books

The first year in which a debt becomes worthless to your business, you must decide on an accounting method for handling bad debts. This method must then be followed each year unless you get permission from the Commissioner of Internal Revenue to make a change. Your choice will be between deducting the debts as they become uncollectable or deducting an estimated reserve each year for debts that are expected to become uncollectable.

Reserve for Bad Debts

Your choice between using the charge-off or the reserve method for claiming bad debt deductions should be made with some care. There are many situations in which the reserve method can make a significant tax difference. For example, an automobile dealer may want to use the reserve method to offset, in part, the reserves withheld by finance companies which the courts have held to constitute taxable income to the dealer.

Generally, a reserve for bad debts will be based on experience. You cannot arbitrarily guess at the percentage of your accounts receivable that is likely to go bad. A certified public accountant, for instance, will determine an adequate reserve for bad debts as a normal part of his audit procedure.

To do this, he will analyze the accounts receivable to find out which accounts are past due, and the length of time they have been outstanding. He will then evaluate the slow-moving receivables in light of discussions with your company's credit manager or with whoever handles your collections, and decide on the amount that may not be collected. A reserve based on a factual analysis such as this will almost invariably be acceptable to the Internal Revenue Service.

If you do not have a CPA, and have to decide for yourself whether you are better off to use the charge-off or reserve method for claiming bad debts, you will need to know how the reserve works.

Say, for example, that at the end of the year you show accounts receivable of \$20,000. Based on an analysis of your accounts, you determine that \$600 would be a reasonable estimate of accounts that are likely to become uncollectable, so you deduct the \$600 as a reserve for bad debts.

During the following year, \$550 worth of receivables actually go bad, leaving \$50 in your reserve account. Your receivables are now up to \$25,000, and you estimate that \$750 will become bad debts. Your reserve still has \$50 left over from the previous year, so you deduct an additional \$700 as a reserve for bad debts, and bring the total reserve up to the estimate of \$750. This same procedure would then be followed each year.

What Happens When A Bad Debt is Recovered?

There are several instances in which a seemingly uncollectable debt could be repaid. For example, a debtor may be in such bad financial condition that there is every justification to consider his debt to you uncollectable. A few years later, the success of your debtor's business finally results in payment of the debt.

If you receive payment at a later date of a debt that you had charged off in an earlier year as uncollectable, you must report the payment on

your tax return as income, but only to the extent that the earlier charge-off helped reduce your taxes.

The amount of tax you saved when you made the deduction has nothing to do with it. It is the amount of the bad debt that you were able to use advantageously as a deduction that should be considered here. The foregoing applies only to a taxpayer who has been deducting bad debts on a charge-off basis. Those taxpayers who are on a reserve basis will credit any recoveries to the bad debt reserve.

CALENDAR OF COMING EVENTS

Jan. 21-23—The Automotive Electric Association regional conference, Atlanta Biltmore, Atlanta, Ga.

Jan. 24-28—International Foreign and Sports Car Show Dinner, Key Auditorium, Miami, Fla.

Jan. 30-Feb. 3—National Automobile Dealers Assn., Washington, D.C.

Feb. 7-8—Automotive Boosters Clubs International executive council and board of governors meetings, Park-Sheraton Hotel, New York City.

Feb. 7-9—Automotive Affiliated Representatives officers, board of directors and general membership meetings, Manhattan Hotel, New York City.

Feb. 8-9—Automotive Service Industry Assn., Carnegie Hall, New York City, N.Y.

Feb. 9—Motor & Equipment Manufacturers Association President's Reception, Hotel Savoy Hilton, New York City.

Feb. 10—Automotive Booster Clubs International banquet, Astor Hotel, New York City.

Feb. 10-13—International Automotive Service Industries Show, Coliseum, New York City, N.Y.

Feb. 17-22—10th Anniversary Show, "Autorama"; Conn. State Armory, Hartford, Conn.

Mar. 10-13—Pacific Automotive Show, City Auditorium, Denver, Colo.

Mar. 12-13—Ohio Automotive Wholesalers Assn. convention, Southern Hotel, Columbus, Ohio.

Mar. 24-27—Southwest Automotive Show, Automobile Bldg., State Fair Park, Dallas, Tex.

Apr. 23—Automotive Wholesalers of Okla., annual convention, Skirvin Hotel, Oklahoma City, Okla.

May 1-3—Michigan Automotive Wholesalers Assn. annual convention, Pantlind Hotel, Grand Rapids, Mich.

May 8-13—ASIA management institute, University of Illinois, Champaign.

May 20-22—New Jersey Automotive Jobbers Assn., convention, Colony Motel, Atlantic City, N.J.

May 22-27—ASIA sales management institute, Syracuse (N.Y.) University.



"50% of our prospects find us through the Yellow Pages"

says Jack R. Taylor, Proprietor, Fact-O-Bake Company, Mobile, Alabama

"Though we advertise our auto painting on TV and in newspapers, it's the Yellow Pages that tell people *where* to find us when they need us. I'd estimate that 50 per cent of our prospects come to us straight from the Yellow Pages.

"Take what happened when we opened a branch in Baton Rouge, La. We just missed getting in the new directory there. Tried to make up for it by an expensive increase in our other advertising. Yet we still had many people tell us they'd looked in the Yellow Pages but couldn't find us.

"I shudder to think of the business we must have lost because folks didn't know where we were located."

Your advertising program isn't complete unless people know *where* you are located. A Yellow Pages **AWHERENESS** plan is the answer. The Yellow Pages man is ready to create one for *your* business. Call him at your Bell telephone business office today.

AUTO PAINTING

FACT-O-BAKE

SEAT COVERS • AUTO BODY REPAIRS
AUTO TOPS • UNDERCOATING



HEmlock 8-9747

HIGH GLOSS - HARD FINISHED BAKED ENAMEL

AS LOW AS \$39.00

- 3 FULL COATS
- 18 MONTHS GUARANTEE

- 7000 COLORS
- 8 HOUR SERVICE

214 ST. JOSEPH

YELLOW PAGES DISPLAY AD (reduced) under *Automobile Painting* sells Fact-O-Bake's services every day of the year. Other listings are: *Automobile Bodies-Repairing, Automobile Seat Covers, Automobile Tops, Enamelers-Porcelain and Steam Cleaning.*



Display this sales-building emblem wherever your prospects can see it. The Yellow Pages representative will gladly supply as many as you need.

1960 Tune-Up—Alignment Specifications

MAKE AND MODEL	ENGINE	No. of Cylinders Bore and (In.)	H.P.	TUNE-UP DATA										FRONT END ALIGNMENT			
				Maximum Brake Size (mm)	Valves		Ignition				Steering Axis Inclination (Deg.)	Caster (Deg.)	Camber (Deg.)	Toe-in (In.)			
					Inlet (Deg.)	Exhaust (Deg.)	Inlet (In.)	Exhaust (In.)	Breaker Point Gap (In.)	Cam Angle (Deg.)					Spark Plug Gap (In.)	Spark Occurs T.C.	
AMERICAN MOTORS CORP.																	
Rambler.....	American 8-6001	8-3 1/2 x 3 1/4	90	CA-14	45	45	.016C	.018C	.020	39	.035	3B	8	0 to 1 1/2°P	1 1/2°N to 1 1/2°P	1/8 to 1/4	
.....	Six 8-6010	8-3 1/2 x 3 1/4	127	CA-14	45	45	.012H	.016H	.016	32	.035	5B	6°11'	0 to 1 1/2°P	1 1/2°N to 1 1/2°P	1/8 to 1/4	
.....	Rebel 8-6020	8-3 1/2 x 3 1/4	200	CA-14	30	45	.012H	0.14H	.017	30	.035	TC	6°11'	0 to 1 1/2°P	1 1/2°N to 1 1/2°P	1/8 to 1/4	
.....	Ambassador 8-6080	8-4 x 3 1/4	250	CA-14	30	45	Hyd	Hyd	.017	30	.035	TC	6°11'	0 to 1 1/2°P	1 1/2°N to 1 1/2°P	1/8 to 1/4	
CHRYSLER CORP.																	
Chrysler.....	Windsor 8-PC1-L	8-4 1/2 x 3 1/4	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Saratoga 8-PC2-M	8-4 1/2 x 3 1/4	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	1°P to 1 1/2°P	1°P to 1 1/2°P	1/8 to 1/4	
.....	New Yorker 8-PC3-H	8-4 1/2 x 3 1/4	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1 1/2°P	0 to 1 1/2°P	1/8 to 1/4	
.....	..... 8-300F	8-4 1/2 x 3 1/4	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1°N	1°P to 1 1/2°P	1/8 to 1/4
De Soto.....	Fireflite 8-PS1-L	8-4 1/2 x 3 1/4	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Adventurer 8-PS3-M	8-4 1/2 x 3 1/4	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PS1-L, PS3-M (Engine Option)	8-4 1/2 x 3 1/4	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	7 1/2	0 to 1°N	1°P to 1 1/2°P	1/8 to 1/4	
Dodge.....	Matador 8-PD1-L	8-4 1/2 x 3 1/4	295	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Polara 8-PD2-H	8-4 1/2 x 3 1/4	325	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PD1-L, PD2-H (Engine Option)	8-4 1/2 x 3 1/4	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
Dodge Dart.....	Seneca 8-PD3-L	8-4 1/2 x 3 1/4	145	AL-14	45	47	.010H	.020H	.020	39	.035	2 1/2 B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Pioneer 8-PD3-M, Phoenix PD3-H	8-3 1/2 x 3 1/4	230	AL-14	45	45	.010H	.018H	.017	30	.035	5B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Seneca 8-PD4-L, Pioneer 8-PD4-M	8-3 1/2 x 3 1/4	255	AL-14	45	45	.010H	.018H	.017	30	.035	10B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Phoenix 8-PD4-H	8-4 1/2 x 3 1/4	310	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PD4-H (Engine Option)	8-4 1/2 x 3 1/4	330	AL-14	45	45	Hyd	Hyd	.017	30	.035	7 1/2 B	6 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
Imperial.....	Custom, Crown, LeBaron 8-PY1	8-4 1/2 x 3 1/4	350	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	1°P to 1 1/2°P	1°P to 1 1/2°P	1/8 to 1/4	
Plymouth.....	Savoy, Belvedere, Fury 8-PP1	8-4 1/2 x 3 1/4	145	AL-14	45	47	.010H	.020H	.020	39	.035	2 1/2 B	6 1/2	0 to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	Savoy, Belvedere, Fury 8-PP2	8-3 1/2 x 3 1/4	230	AL-14	45	45	.010H	.018H	.017	30	.035	10B	6 1/2	0 to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PP2 (Engine Option)	8-3 1/2 x 3 1/4	260	AL-14	45	45	.010H	.018H	.017	30	.035	10B	6 1/2	0 to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PP2 (Engine Option)	8-4 1/2 x 3 1/4	305	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
.....	8-PP2 (Engine Option)	8-4 1/2 x 3 1/4	310	AL-14	45	45	Hyd	Hyd	.017	30	.035	10B	6 1/2	0 to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
Valiant.....	6-V100 QX1-L, V-200 QX1-H	6-3 1/2 x 3 1/4	101	AL-14	45	47	.010H	.020H	.020	39	.035	5B	7 1/2	1°N to 1 1/2°N	1°P to 1 1/2°P	1/8 to 1/4	
FORD MOTOR CO.																	
Edsel.....	Ranger-6	8-3 1/2 x 3 1/4	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.025	37	.034	4B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	Ranger-8	8-3 1/2 x 3 1/4	185	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	8-Engine Option	8-4 x 3 1/4	300	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
Falcon.....	..... 6	8-3 1/2 x 2 1/4	90	Ch-18	45 1/2	45 1/2	.016H	.016H	.025	37	.034	2B	7	1°P	1°P to 1°P	1/8 to 1/4
Ford.....	Fairlane, Fairlane 500, Galaxie-6	8-3 1/2 x 3 1/4	145	Ch-18	45 1/2	45 1/2	.019H	.019H	.026	37	.034	4B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	Fairlane, Fairlane 500, Galaxie-6	8-3 1/2 x 3 1/4	185	Ch-18	45 1/2	45 1/2	.019H	.019H	.015	27	.034	3B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	All Models (Engine Option)	8-4 x 3 1/4	300	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	Thunderbird-6	8-4 x 3 1/4	300	Ch-18	60 1/2	45 1/2	Hyd	Hyd	.015	27	.034	3B	6 1/2	1°N to 1°P	1°P to 1°P	1/8 to 1/4	
.....	(Engine Option)	8-4 1/2 x 3 1/4	350	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	4B	6 1/2	1°P to 1°P	1°P to 1°P	1/8 to 1/4	
Lincoln.....	Lincoln, Premier, Continental-8	8-4 1/2 x 3 1/4	315	Ch-18	45 1/2	45 1/2	Hyd	Hyd	.015	27	.034	6B	7-28'	0 to 1 1/2°N	0 to 1°P	1/8 to 1/4	
Mercury.....	Monterey-8	8-3 1/2 x 3 1/4	205	Ch-18	45	45	.019H	.019H	.015	27	.034	3B	7	0 to 1 1/2°N	0 to 1°P	1/8 to 1/4	
.....	Monterey-8 (Engine Option)	8-4 1/2 x 3 1/4	280	Ch-18	45	45	Hyd	Hyd	.015	27	.034	6B	7	0 to 1 1/2°N	0 to 1°P	1/8 to 1/4	
.....	Montclair, Park Lane-8	8-4 1/2 x 3 1/4	310	Ch-18	45	45	Hyd	Hyd	.015	27	.034	6B	7	0 to 1 1/2°N	0 to 1°P	1/8 to 1/4	
GENERAL MOTORS CORP.																	
Buick.....	Le Sabre 8-4400	8-4 1/2 x 3 1/4	250	AC-14	45	45	Hyd	Hyd	.015	30	.033	5B	7	2°N	1°P	1/8 to 1/4	
.....	Invicta 8-4600; Electra 8-4700, 4800	8-4 1/2 x 3 1/4	325	AC-14	45	45	Hyd	Hyd	.015	30	.035	12B	7	2°N	1°P	1/8 to 1/4	
Cadillac.....	8-62, 60, 75	8-4 x 3 1/4	345	AC-14	44	44	Hyd	Hyd	.016	30	.035	5B	4	1°N to 1 1/2°N	1°N to 1 1/2°P	1/8 to 1/4	
.....	Eldorado 8-62	8-4 x 3 1/4	345	AC-14	44	44	Hyd	Hyd	.016	30	.035	5B	4	1°N to 1 1/2°N	1°N to 1 1/2°P	1/8 to 1/4	
Chevrolet.....	8-1100, 1300, 1500, 1700	8-3 1/2 x 3 1/4	135	AC-14	31	46	Hyd	Hyd	.019	32	.036	5B	7°11'	1°N to 1°P	0 to 1°P	1/8 to 1/4	
.....	8-1200, 1400, 1600, 1800	8-3 1/2 x 3 1/4	170	AC-14	46	46	Hyd	Hyd	.019	30	.036	4B	7°11'	1°N to 1°P	0 to 1°P	1/8 to 1/4	
.....	8-1200, 1400, 1600, 1800 (Engine Option)	8-4 1/2 x 3 1/4	250	AC-14	46	46	Hyd	Hyd	.019	30	.036	8B	7°11'	1°N to 1°P	0 to 1°P	1/8 to 1/4	
Corvair.....	Corvette 8-967	8-3 1/2 x 3 1/4	230	AC-14	46	46	Hyd	Hyd	.019	30	.036	4B	4	1°P to 2°P	1°N to 1 1/2°P	0 to 1/8	
Corvair.....	8-500, 700	8-3 1/2 x 2 1/4	80	AC-14	45	45	Hyd	Hyd	.019	33	.035	4B	7	5°P to 5°P	0 to 1°P	1/8 to 1/4	
Oldsmobile.....	Dynamic 8-58	8-4 1/2 x 3 1/4	240	AC-14	45	45	Hyd	Hyd	.016	30	.030	5B	10	0 to 1°N	1°N to 1 1/2°P	0 to 1/8	
.....	Super 88, Ninety-Eight-8	8-4 1/2 x 3 1/4	315	AC-14	45	45	Hyd	Hyd	.016	30	.030	5B	10	0 to 1°N	1°N to 1 1/2°P	0 to 1/8	
Pontiac.....	Catalina 80-21, Ventura 80-23	8-4 1/2 x 3 1/4	215	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	4°50'	1°N to 2°N	1°N to 1 1/2°P	0 to 1/8	
.....	Star Chief 80-24-8	8-4 1/2 x 3 1/4	281	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	4°50'	1°N to 2°N	1°N to 1 1/2°P	0 to 1/8	
.....	Booneville 8-60-27, 60-28	8-4 1/2 x 3 1/4	281	AC-14	30	45	Hyd	Hyd	.016	30	.036	6B	4°50'	1°N to 2°N	1°N to 1 1/2°P	0 to 1/8	
STUDEBAKER-PACKARD CORP.																	
Studebaker.....	Lark VI 8-60S	8-3 x 4	90	Ch-14	45	45	.018C	.018C	.020	39	.031	2B	6	1°N to 2 1/2°N	0 to 1°P	1/8 to 1/4	
.....	Lark VIII 8-60V	8-3 1/2 x 3 1/4	180	Ch-14	45	45	.024H	.024H	.016	30	.036	4B	6	1°N to 2 1/2°N	0 to 1°P	1/8 to 1/4	
.....	Hawk 8-60V	8-3 1/2 x 3 1/4	210	Ch-14	45	45	.024H	.024H	.016	31	.036	4B	6	1°N to 2 1/2°N	0 to 1°P	1/8 to 1/4	

ABBREVIATIONS

1—Left only; right, 1/2N to 1/2P.

AC—A.C. Spark Plug Div.
AL—Electric Autolite Co.
B—Before top center.

C—Cold.
CA—Champion or Auto-Lite.
CH—Champion Spark Plug Co.
H—Hot.

Hyd—Hydraulic valve lifters.
N—Negative.
P—Positive.
TC—Top center.

These Genuine Schrader Products are Basic to Best Tire Service

Provide complete tire air service: Replacement valves, caps and cores, rivets, patches—full repair on all tires that come in to you. It's easier, faster, better when you use genuine Schrader Products. Be prepared to handle every job. Stock these basic Schrader Products—your supplier has them all! (And for your customer's safety, always make it a rule to change the valve when mounting new tubeless tires!)

VALVES!

Your tires are now delivered valveless, so don't get caught . . . keep plenty of genuine Schrader valves on hand for every tire situation.



CAPS AND CORES!

A fresh Schrader Cap and Core with every tire change is air-seal-insurance every customer appreciates.



REPAIRS!

Customers want the best, so why not make repairs easy and quick the Schrader way!

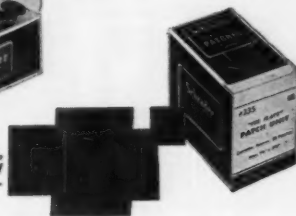


This new #5072 complete "FIX FLATS" Repair Kit is Dealer priced complete at only \$15.95 each, U. S. A.



#892 Rivet Kit perfectly plugs punctures to 1/4".

Self-vulcanizing Cold Patches, available in many sizes, really seal tube or tubeless.



New! ALL SERVICE REPAIR KIT!

Makes it easy and profitable to fix any tire for any vehicle . . . the modern self-vulcanizing way. Will produce \$140 worth of repair business for you! Contains: skiving knife, stitchee, inserting tool, buffing brush, cleaning solution, vulcanizing stock, instruction poster, self-vulcanizing fluid, patches of all types and sizes.

Schrader
a division of **SCOVILL**

A. SCHRADER'S SON • BROOKLYN 38, N. Y. Division of Scovill Manufacturing Co., Inc.

FIRST NAME IN TIRE VALVES

FOR ORIGINAL EQUIPMENT AND REPLACEMENT

CURRENT PASSENGER CAR PRICE, WEIGHT AND BODY TABLE

Following are prices at factory for cars with standard equipment as of December 21, 1959, State or local taxes, transportation and finance charges and optional equipment are extra.

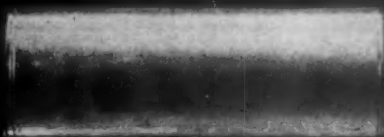
BODY MAKE AND MODEL	List Price at Factory without Federal Taxes				Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes				Shipping Weight	BODY MAKE AND MODEL	List Price at Factory without Federal Taxes				Shipping Weight
	Price at Factory	Federal Taxes	Handling Charges	Suggested Price at Factory including Federal Taxes			Price at Factory	Federal Taxes	Handling Charges	Suggested Price at Factory including Federal Taxes			Price at Factory	Federal Taxes	Handling Charges	Suggested Price at Factory including Federal Taxes	
AMERICAN MOTOR CORP.																	
RAMBLER																	
American-8																	
Deluxe																	
Sedan, 4d.....	1638	157	1795	2469													
Sedan, 4d.....	1663	161	1844	2494													
Sta. Wagon, 2d.....	1847	173	2020	2539													
Super-6																	
Sedan, 2d.....	1717	163	1880	2486													
Sedan, 4d.....	1782	167	1929	2521													
Sta. Wagon, 2d.....	1928	179	2105	2566													
Rambler-8																	
Deluxe																	
Sedan, 4d.....	1918	180	2098	2918													
Sta. Wagon, 4d, 2s.....	2224	203	2427	3055													
Super																	
Sedan, 4d.....	2071	197	2268	2948													
Sta. Wagon, 4d, 2s.....	2345	217	2562	3071													
Sta. Wagon, 4d, 3s.....	2484	223	2687	3144													
Custom																	
Sedan, 4d.....	2178	205	2383	2949													
Hard top, 4d.....	2248	210	2458	2981													
Sta. Wagon, 4d, 2s.....	2482	225	2677	3074													
Sta. Wagon, 4d, 3s.....	2571	231	2802	3155													
Rebel-V8																	
Super																	
Sedan, 4d.....	2182	205	2387	3282													
Sta. Wagon, 4d, 2s.....	2456	225	2681	3408													
Sta. Wagon, 4d, 3s.....	2575	231	2806	3469													
Custom																	
Sedan, 4d.....	2289	213	2502	3292													
Hardtop, 4d.....	2359	218	2577	3319													
Sta. Wagon, 4d, 2s.....	2563	233	2796	3408													
Sta. Wagon, 4d, 3s.....	2682	239	2921	3480													
Amtrak-V8																	
Super																	
Sedan, 4d.....	2389	218	2587	3414													
Sta. Wagon, 4d, 2s.....	2643	238	2881	3551													
Sta. Wagon, 4d, 3s.....	2782	244	3006	3681													
Custom																	
Sedan, 4d.....	2584	228	2732	3428													
Hardtop, 4d.....	2688	234	2822	3465													
Sta. Wagon, 4d, 2s.....	2776	248	3026	3583													
Hdt. Sta. Wagon.....	2862	254	3116	3583													
Sta. Wagon, 4d, 3s.....	2898	253	3151	3592													
CHRYSLER CORP.																	
CHRYSLER																	
Windstar																	
Sedan, 2d.....	2909	230	3139	3815													
Hardtop, 2d.....	2988	236	3224	3855													
Hardtop, 4d.....	3048	240	3288	3850													
Convertible.....	3308	260	3568	3855													
Sta. Wagon, 2s.....	3411	267	3678	4235													
Sta. Wagon, 3s.....	3486	273	3759	4390													
Saratoga																	
Sedan, 4d.....	3584	280	3864	4010													
Hard top, 2d.....	3640	284	3924	4030													
Hardtop, 4d.....	3712	290	4002	4035													
New Yorker																	
Sedan, 4d.....	4020	314	4334	4145													
Hardtop, 2d.....	4058	318	4386	4175													
Hardtop, 4d.....	4121	322	4443	4175													
Convertible.....	4453	347	4800	4185													
Sta. Wagon, 2s.....	4890	387	4947	4515													
Sta. Wagon, 3s.....	4891	388	5056	4535													
300-F																	
Hardtop, 2d.....	4852	384	5336	4536													
Convertible.....	5352	414	5766	4536													
DE SOTO																	
Fireflite																	
Sedan, 4d.....	2748	219	2967	3805													
Hardtop, 2d.....	2827	225	3052	3825													
Hardtop, 4d.....	2888	229	3117	3805													
Adventurer																	
Sedan, 4d.....	3270	259	3529	3895													
Hardtop, 2d.....	3348	265	3613	3845													
Hardtop, 4d.....	3408	269	3677	3940													
DODGE DART																	
Seneca-6																	
Sedan, 2d.....	2076	202	2278	3385													
Sedan, 4d.....	2124	206	2330	3420													
Sta. Wagon, 4d, 6p	2464	231	2695	3605													
Pioneer-6																	
Sedan, 2d.....	2199	211	2410	3315													
Hard top, 2d.....	2271	217	2488	3410													
Sedan, 4d.....	2244	215	2489	3430													
Sta. Wagon, 4d, 6p	2549	238	2787	3620													
Sta. Wagon, 4d, 6p	2647	245	2892	3715													
Phoenix-6																	
Sedan, 4d.....	2371	224	2595	3420													
Hard top, 2d.....	2382	226	2618	3460													
Hardtop, 4d.....	2447	230	2677	3460													
Convertible.....	2625	243	2888	3460													
CHRYSLER CORP. cont'd																	
DODGE DART, cont'd																	
Seneca-V8																	
Sedan, 2d.....	2187	210	2397	3530													
Sedan, 4d.....	2235	214	2449	3600													
Sta. Wagon, 4d, 6p	2575	240	2815	3975													
Pioneer-V8																	
Sedan, 2d.....	2310	220	2530	3540													
Sedan, 4d.....	2385	223	2578	3610													
Hardtop, 2d.....	2382	225	2607	3610													
Sta. Wagon, 4d, 6p	2660	246	2906	4000													
Sta. Wagon, 4d, 6p	2758	253	3011	4065													
Phoenix-V8																	
Sedan, 4d.....	2482	233	2715	3610													
Sedan, 2d.....	2503	234	2737	3605													
Hardtop, 4d.....	2558	238	2796	3655													
Convertible.....	2738	252	2988	3690													
DODGE																	
Matador V-8																	
Sedan, 4d.....	2672	258	2930	3725													
Hardtop, 2d.....	2734	262	2996	3705													
Hardtop, 4d.....	2807	268	3075	3820													
Sta. Wagon, 6p.....	2960	279	3230	4046													
Sta. Wagon, 6p.....	3067	287	3354	4120													
Polaris-V8																	
Sedan, 4d.....	2886	273	3141	3735													
Hardtop, 2d.....	2920	276	3196	3740													
Hardtop, 4d.....	2983	282	3275	3815													
Convertible.....	3125	291	3416	3765													
Sta. Wagon, 6p.....	3208	296	3508	4085													
Sta. Wagon, 6p.....	3315	306	3621	4220													
IMPERIAL																	
Custom																	
Southampt., 2d.....	4481	352	4833	4655													
Southampt., 4d.....	4580	359	4939	4870													
Southampt., 4d.....	4580	359	4939	4700													
Crown																	
Southampt., 2d.....	4826	385	5133	4720													

FACTORY ENGINEERED

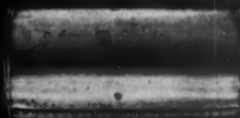
BUICK PARTS...

**ALWAYS
RIGHT
FOR
BUICK**

BUICK exhaust and tail pipes are formed to fit without bending or adapting... reduces installation time



BUICK mufflers feature heavy rust- and corrosion-resistant coatings... precision-fit connections for quick, sure installation



BUICK resonators are acoustically tuned to the BUICK exhaust system to provide maximum sound reduction with minimum back pressure

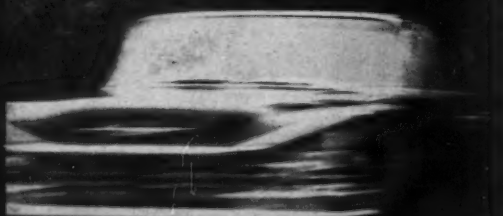
BUICK MOTOR DIVISION, GENERAL MOTORS CORPORATION

One way to be sure you're using replacement parts that are right for Buick is to get them from the same people who made the car. This means using Buick Factory Engineered Parts. A *complete* inventory is as close as your nearest Buick dealer.

And when you stop for parts at your Buick Dealer's, take any problems you may have concerning testing or installation procedures to the parts manager or service manager. They can give you helpful tips that will save time and increase profits.

So, whether it's exhaust system parts you need, or any other Buick parts, get them from your Buick dealer, **AT YOUR FULL DISCOUNT.**

REMEMBER—YOUR AUTHORIZED QUALITY BUICK DEALER IS YOUR ONE-STOP SOURCE FOR QUALITY BUICK PARTS



ENGINEER APPROVED ACCESSORIES



FACTORY ENGINEERED PARTS

New Products

Continued from page 73

states, with the precision torque wrench, instruction sheet and the application data included with each package. The new steel cabinets, with easy operating doors and improved shelving, stocks both tapered roller and ball bearings in most wanted wheel sizes company states. For more infor-

mation write: Federal-Mogul Ser., Div. of Federal-Mogul-Bower, Inc., 11031 Shoemaker Ave., Detroit 13, Mich.

Multi-Purpose Patch

For both tubeless tires and tubes

Kex Products Inc.: A new multi-purpose patch for both tubeless tires and tubes is announced. Designated as the Kex Du-All Patch, this new-type patch is

made up of two laminations of rubber, the outer layer being of cured rubber to form a permanent seal in the tire casing. The inner layer is made up of a compounded rubber in a soft-solid state, company states. Application is said to be as easy as any ordinary chemical patch and when in place, wheel rotation causes the inner layer of soft rubber to seek out the injury and flow into it filling it completely without stress or strain on adjacent cord layers. After filling the injury chemical action and road heat vulcanizes the rubber into a permanent repair, the company claims. For more information write: Kex Products Inc., 4400 St. Vincent Ave., St. Louis 19, Mo.

Parts Cleaner

Comes with dip basket for easy immersion

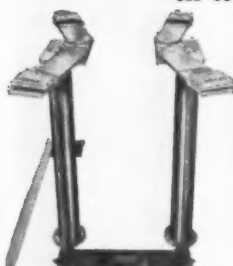
Union Carbide Consumer Prod. Co.: A new carburetor and metal



parts cleaner, has been introduced. It comes with a special dip basket for immersion of metal parts into the cleaner. Company states that it is designed to save time and labor costs in cleaning automatic transmission parts, carburetors, brakes, fuel pumps and other engine parts. The new cold immersion cleaner removes carbon deposits, oil, varnish, sludge, gum, paint and other residues without harming or discoloring metal parts. Special inhibitors in the cleaner protect metal parts against corrosion. For more information write: D. G. Parker, Mgr., Sales Promotion, Union

Continued on page 83

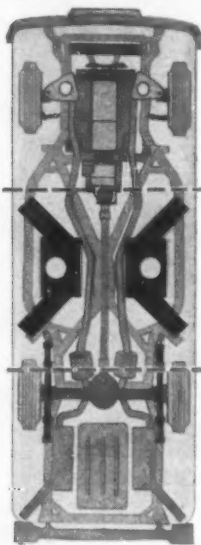
SEE US AT BOOTHS 17-18-19 N.A.D.A. CONVENTION



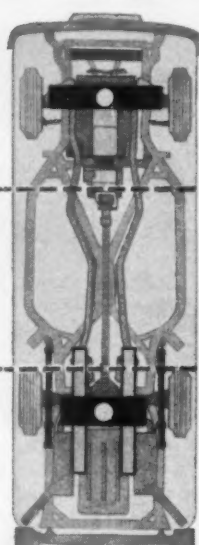
NEW JOYCE QUICK SPOT LIFT

Undercar Comparison Proves Mechanic's Pay Increases With Joyce *Quick Spot* Lift

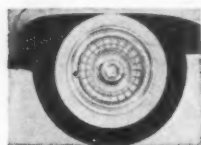
FORE AND AFT TYPE TWO-POST LIFT



216,759,000 JOBS
66% OF ALL SERVICES ARE PERFORMED ON FRONT AREAS OF CARS...completely unobstructed by QUICK SPOT.*
Less Job Time ... Larger Pay!

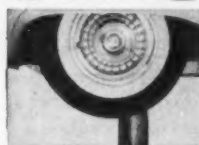


27,748,000 JOBS
ONLY 8% OF ALL SERVICES ARE PERFORMED IN MIDDLE AREAS OF CARS...QUICK SPOT moveable arms do not obstruct any of these services.*
Less Job Time ... Larger Pay!



Quick Spot allows wheels to drop below fender wells for fast wheel removal, tire and brake work.

Axle engaging type lifts crowd wheels under fender wells.



*Percentages computed from 1958 Service Job Analysis by Motor Service Magazine.

DON'T SAY "TWO-POST," SAY JOYCE "QUICK SPOT"! write for descriptive literature Bul. 155-L

THE JOYCE-CRIDLAND COMPANY

Designers and builders of lifting equipment since 1873
U. S. A.: 2027 E. FIRST STREET, DAYTON 3, OHIO
Canada: Midland Foundry & Machine Co., Ltd., Midland, Ont.

One way to decide who pays the check...



But not the way to buy Tire Valves and Hardware!

Below are a few of the **DILL** products available from your supplier.



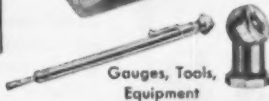
Tubeless and
Tube Type Valves



Valve-Pak
Kits for
Tubeless



Valve Insides,
Caps, Extensions



Gauges, Tools,
Equipment



Dilletric and Dill'co Tire Repairs

Considering the vital job tire valves must do—provide airtight security—what you use is important indeed! The reliability of the product is far more important than a penny or two saved.

Dill has been a respected manufacturer of top quality valves, valve hardware, tools and equipment for over 50 years. Today, our most important asset is a reputation for producing the finest possible products . . . a reputation to which we will always strive to add.

What does this all mean to you? It means complete reliability, dependability and safety when you specify Dill. Why take a chance on less?

DILL

Manufacturing Company
700 East 82nd Street • Cleveland 3, Ohio

Why you can make more money with Dyna-Vision® tune-up



Dyna-Vision with Power-Chek saves you at least an hour per job, eliminates time wasted on untunable engines, never misses a possible parts or service sale, reduces comebacks to a minimum, helps assure customer satisfaction. Here's why:

New Dyna-Vision is more than just another scope-meter combination. It is a completely integrated motor tuner capable of analyzing all four systems of a modern engine in only 15 minutes. Nothing else on the market can do a comparable job in less than an hour.

Trouble can originate at over 100 points in the four basic engine systems—ignition, carburetion, low voltage and power. To check them all with meter-type equipment takes 1-4 hours and is costly in time and labor. A scope-meter unit does the job faster, but it still requires some 50 time-consuming connections and control adjustments. And no "scope" until now has provided a quick check on engine mechanical condition—rings, valves, gaskets, etc.

Dyna-Vision is different. It requires only 7 connections for 100% diagnosis. This includes the Power-Chek, which is equivalent to a compression test, yet takes less than a minute and is made with the engine running. With any other equipment, this check takes up to 1½ hours and thus is seldom made except as a last resort. Yet 10-15% of all engines require some mechanical repair before successful tune-up is possible.

These are just a few reasons why tune-up with Dyna-Vision is more profitable. For complete details, mail the coupon today.

Heyer Industries Incorporated, Dept. MA 1
Belleville 9, N.J.

- ☐ Send complete data on Dyna-Vision, including details of easy-payment plan.
- ☐ Arrange a demonstration at my convenience.

Name _____ Title _____

Company _____

Address _____

☐ Service Station ☐ Repair Shop ☐ Dealer

No. of mechanics employed _____



HEYER INDUSTRIES INCORPORATED
Belleville 9, N. J.

Dealer Training and Service in



We are prepared to sell and train dealers on a national basis through the following Dyna-Sales companies (addresses indicate store and warehouse locations):

Belleville, N.J.
500 Cortlandt St. Plymouth 1-2222

Boston, Mass.
7 Jersey St. Copley 7-3159

Chicago (Oak Park), Ill.
666 W. Madison St. EUclid 3-5950

Cincinnati (Deer Park), Ohio
3980 Superior Ave. TWeed 1-3748

Cleveland, Ohio
7413 Memphis Ave.
SHadyside 9-1880

Denver, Col.
1217 California St. TABor 5-5066

Detroit, Mich.
15827-31 Plymouth Rd. BR 3-5144

Houston, Tex.
6821 Academy St. MADison 3-1442

Indianapolis, Ind.
6060 E. Washington St.
Fleetwood 9-9026

Los Angeles, Calif.
833 E. Sixth St. MADison 7-9377

Milwaukee, Wis.
3222 National Ave.
EVERgreen 4-0787

Minneapolis, Minn.
5456 Nicollet Ave. TAYlor 4-0430

New Orleans, La.
7202 Washington Ave. GA 2214

Philadelphia, Pa.
831-33 N. Broad St. POplar 3-2973

Pittsburgh, Pa.
22 Diamond North FAirfax 1-1234

San Francisco, Calif.
183 Utah Ave. JUno 9-5363

Seattle, Wash.
3155 Elliott Ave. ATwater 3-5345

St. Louis (University City), Mo.
7523 Olive St. Rd. PArkview 1-2562

Dallas, Tex. Contact Belleville, N.J.
Plymouth 9-0800

Dyna-Vision Representatives

Atlanta, Ga. MEIrose 4-4959

Burlington, N.C. JUNiper 4-7239

Gadsden, Ala. LIBerty 6-0100

Kingsport, Tenn. CIRCLE 6-2667

Nashville, Tenn. ALPine 5-3574

Phoenix, Ariz. AMherst 5-6786

Richmond, Va. MILton 3-7708

Tampa, Fla. TAMpa 47-2494

HEYER INDUSTRIES INCORPORATED
Belleville 9, N.J.

New Products

Continued from page 80

Carbide Consumer Prod. Co.,
Div. of Union Carbide Corp., 30
E. 42nd St., New York 17, N.Y.,
or phone MUrray Hill 7-8000.

Brake Tools

*For servicing
new compact cars*

Raybestos Division of Raybestos-
Manhattan, Inc.: New tools re-
quired for brake service on 1960



Corvairs and Valiant cars are being marketed. The complete brake service tool set consists of: compact car brake spring tool, compact car star adjuster, combination $\frac{7}{16} \times \frac{3}{8}$ inch special offset box wrench and a special star adjuster spoon. The set also includes a brake adjuster wrench for internal expanding parking brakes, $\frac{5}{16} \times \frac{3}{8}$ inch combination brake bleeder and cap wrench, and L-shaped tool to remove and replace brake shoe return springs. A $1\frac{5}{16}$ inch combination box and open end wrench and a $\frac{7}{16}$ inch deep throat offset box wrench, comes also in the set. Brake spring pliers are included. For more information write: Robert C. Calderone, Adv. Mgr., Raybestos Div. of Raybestos-Manhattan, Inc., P.O. Box 1021, Bridgeport 2, Conn., or phone ED 7-3341.

Cellomatic Battery

Features replaceable cells

Scranton Cellomatic Battery Corp.: In addition to the original 48-month battery, company is now offering their replaceable cell batteries built to 24 and 36 month guarantees. According to the company all of the features

of the original replaceable cell design have been retained in these new lines, including individual cell air cooling, selenium-plated grids, koppers polystyrene cells and super dylan polyethylene frames as well as the open gate element rests. For information write: Scranton Cellomatic Battery Corp., Archbold, Penna.

Protective Coating

*Improves car appearance
for "make ready"*

E. I. DuPont De Nemours & Co.: A protective coating for the acrylic lacquers and "super" enamels used on virtually all 1959 cars has been developed. "Car Shield," an addition to the No. "7" Line is formulated for use during the first year to 18 months of car life to enhance the high luster and provide a water repellant surface that washes easier, the company states. It is



simply spread on and, when it has dried to a haze whisked off with a dry cloth. It contains no abrasive and is not intended for use as a cleaner. When the new

Continued on page 86



.22 Cal. Automatic
\$6.95

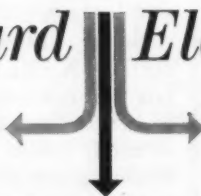
The skilled hand of the German gunsmith is responsible for this .22 caliber, 8-shot repeater automatic with self-ejecting clip. Just 4" long, fits easily into pocket or purse. Ideal for sporting events, stage use (not available to Calif. residents). Not a lethal weapon. Sold on money back guarantee. Comes for \$6.95 ppd. from Best Values, Dept. A-276, 403 Market, Newark, New Jersey.

THIS LINE IS

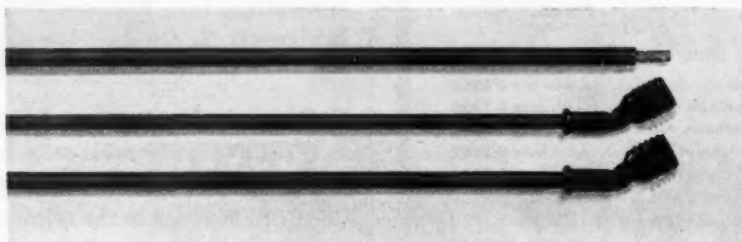
COMPLETE!

Packard Electric

Warren, Ohio



"Live Wire" division of General Motors



*** A PACKARD EXCLUSIVE—T.V.R.S. CABLE**

Original equipment on millions of vehicles, this high-tension ignition cable is needed to stop static where it starts.

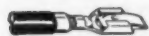
It's Packard Automotive Cable



High- and Low-Tension Cable



Engine Compartment Cable



Snap Fast Connectors



Battery Cable



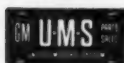
*T.V.R.S. (Television-Radio Suppressor) Cable**



Used on more new cars than all other makes combined



Packaged for profit, with helpful data on the box



Sold through United Motors System

IT'S PACKARD FOR ALL YOUR CABLE NEEDS

NEW! EXTRA-HEAVY CONSTRUCTION

Axle Stands

by **KEN-TOOL**

Sure-Grip Saddle

Self-Locking

Tripod Base



65% Overload Design

Non-Tilt



3-TON
T-124
passenger cars



5-TON
T-127
passenger, light trucks



7-TON
T-125
medium trucks, farm equipment



10-TON
T-128
Heavy-duty trucks, buses



15-TON
T-129
Extra-heavy-duty tractor trailers, vans, heavy contractor equipment

A size for every job... rugged, low-cost... more safety features. Wide tripod base eliminates rocking, even on rough or sloping floors... prevents tipping. Positive-locking, self-engaging lug.

WILL NOT RELEASE UNDER LOAD!

Built like a surveyor's tripod to eliminate rocking. **Quick delivery from your local jobber.**

SELF-LEVELING TRIPOD DESIGN

KEN-TOOL MFG. CO.
AKRON 5, OHIO

New Products

Continued from page 83

auto paints begin to dull, a cleaner should be used prior to application of the new material. For more information write: Allan Perry, Room D-8033, E. I. duPont de Nemours & Co., Public Relations Dept., Wilmington, Del., or phone, PR 4-2000.

Exhaust Unit

Designed for safe removal of carbon monoxide fumes

Car-Mon Products, Inc.; A new one-piece floor plate and tube guide for use with company's underfloor carbon monoxide exhaust systems is announced. Called the Econo Unit, it is one-piece construction. The unit consists of a heavy steel floor plate, with lid, and bituminous treated tube guide which slips into posi-



tion in either 6 or 8 inch tiles. Its one-piece design also affords safe removal of carbon monoxide fumes in any type of layout. Designed for auto dealer and garage service areas, the Econo Unit accommodates a 3 inch tube to serve all car exhaust needs, company states. Installation in pairs permits servicing dual tail pipe cars or servicing two cars at the same time. For more information write: Car-Mon Products, Inc., 1541 W. Devon Ave., Chicago 26, Ill.

Compression Tester

Spark plug adapter fits almost all cars

Kal-Equip Co.; Company has developed a new kind of compression tester. With this new tester, company claims, the mechanic

Continued on page 87

save time...
save money
with these complete
REPAIR KITS

—all the parts needed
for a trouble-free repair job.



jack-pack

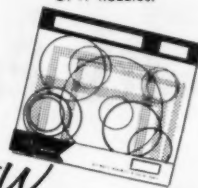
HYDRAULIC JACK REPAIR KITS. All Makes... All Models. Easy to install in spare time.



NEW noz-I pack

NOZZLE REPAIR KITS

One kit repairs all BUCKEYE nozzles. One kit repairs all OPW nozzles.



NEW jack-pack

COMPLETE SEALING LINE FOR AUTOMATIC TRANSMISSIONS

- ★ Overhaul Kits
- ★ Gaskets & Rubber Sets
- ★ Sealing Ring Sets



"HOOT MON! It's thrifty to use these performance proven kits made by JACK-PACK. Order from your jobber today—or write for illustrated brochure!"

jack-pack

Manufacturing Co. Box 32188
2115 N. Marianna Ave.
Los Angeles 32, California

New Products

Continued from page 86

does not have to hold it in the spark plug hole with his hand and does not need several different adapters and accessories to reach spark plug locations. The one spark plug adapter fits almost all cars, and spark plug locations. After mechanic removes the spark plug from the engine, he screws the plug adapter into the hole with finger pressure only. The tester is then clicked into the adapter and the engine is cranked. For more information write: Kal-Equip Co., 411 Washington St., Otsego, Mich.

Fuel Pumps

Made of aluminum with one piece cam levers

Carter Carburetor Division, AFC Industries, Inc.: Coverage of the replacement fuel pump market for all popular applications, including trucks and industrials, is now possible through a new line of Zip Pumps, company states. Zip Pumps are of lightweight aluminum construction with one-piece cam levers. Featured on most double action pumps is a cam follower shoe which, it is said, reduces wear on the cam lever by distributing pressure over a greater area. An additional factor reducing cam lever wear is the non-operation of the vacuum booster as long as manifold pressure is above 11 inches. Other features include accordion type oil seals to prevent draining oil from the crankcase and one-piece fiber-impregnated Buna-N rubber diaphragm which will withstand a temperature range of 60 degrees to +180 degrees F. All Zip Pumps are equipped with slip on connectors and rubber wafer valves. For more information write: Frank J. Schreiner, Gen. Sales Mgr., Dist. Sales Div., Carter Carburetor Div., AFC Industries, Inc., 2840 N. Spring Ave., St. Louis 7, Mo., or phone Jefferson 1-2950.

Commercial Batteries

Battery line for commercial-type service

Exide Automotive Division, The Electric Storage Battery Co.: A line of commercial batteries designed for rugged service has been announced. This new battery line is built with A-S 57 process (anti-sulphate), designed to result in a fresher battery in commercial-type service.

Vibration damage, company states, is no longer a problem due to "plate-locked" assembly. Additional features are hi-impact rubber containers, patented grid alloys, rubber separators, element protectors, G.O.X. active material and non-cracking sealing compound. Company has engineered the commercial battery line for use by the fleet operator. For more information write: R. A. Whetstone, Sales Promotion

Continued on page 88

FROM BLACKHAWK'S LONG RED LIFTING LINE!

LIFT 'EM ANYWHERE ... WITH THIS SPACE-SAVING PORTABLE HOIST!

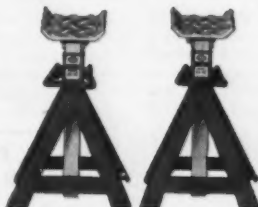
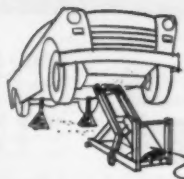


**Air-Powered
MOBILE LIFTS**
Passenger and Truck Models
\$238.00 to \$472.00

Speed up brake and spring jobs, tire rotations, wheel work, tail pipe and muffler replacements! Free your hoist for other service jobs! These Blackhawk mobile lifts make your work safer, faster.

- **ML-30** stores in 28 sq. in. Lifts front end to 34". Has 8 working heights, safety lock, 3,000 pounds.
- **ML-40** lifts either end to 55". Extra low profile for clearing all bumpers. Two safety ratchet locks. 3,500 pounds capacity.
- **ML-50** lifts front and rear of trucks. Lifting range from 5½" to 50". Has mechanical locking safety ratchets. Easy to maneuver.

"HIGH AND DRY" IN SECONDS
Raise car to full height. Place rocker stands as far back on side rails as possible. Lower on to stands. Do the job faster and easier without tying up a hoist.



Perfect mates for the ML-40 — to lift all four wheels of every car.
Model AX-40 Rocker Stands \$24.00 per pr.

Write for free
Bulletin No. J-111



BLACKHAWK®

BLACKHAWK AUTOMOTIVE DIVISION
Dept. J-610, Milwaukee 46, Wisconsin

New Products

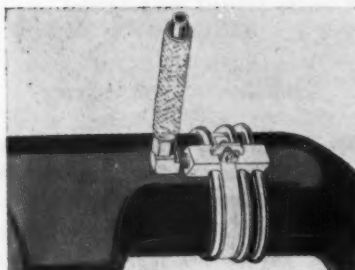
Continued from page 87

Mgr., Exide Automotive Div.,
P.O. Box 6266, Cleveland 1, Ohio,
or phone ULster 1-2600.

Heat Riser Tube Kit

*Comes with self tapping
screw and a steel clamp*

Wohlert Corp.: An improved
heat riser tube replacement kit



is now available. This kit is
furnished complete with self-tap-
ping screw and a steel clamp.

With the steel clamp you will not
have to drill into manifold or
cross over pipe, but merely
fasten clamp. With this kit,
company claims, only one set is
needed for coverage on all cars
and trucks. The original heat
tube does not have to be re-
moved. For more information
write: Louis A. Leitz, Sales Mgr.,
Wohlert Corp., 708 E. Grand
River, Lansing 5, Mich., or phone
IV 4-4521.

After 15 Years In The Making . . .

*FROSTEMP

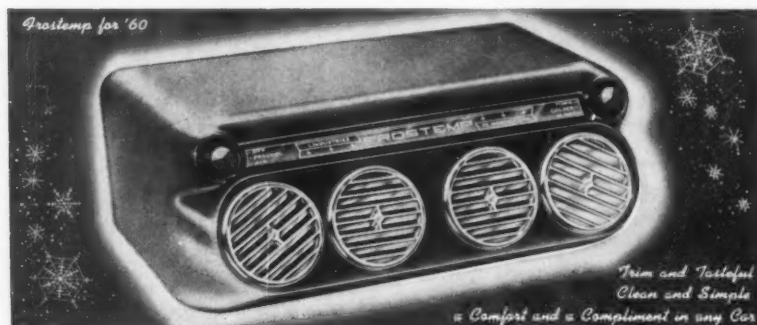
Is Yours—Distributor & Customer APPROVED!

For 15 years you have been designing an auto-
motive air conditioner. Each time you expressed
your opinion you drew another specification
toward development of the ideal product.

Lindustries Engineers, who designed and built
the first independent auto air conditioner in
America, translated your opinions into design,
engineering and production of the perfectly pro-
portioned Frostemp for '60.

*"The First
Auto Air Conditioner
Ever Designed
By Public Opinion"*

Frostemp was tested and accepted through a
carefully selected group of Distributors from coast
to coast!



Economy Performer!

Rock-bottom in maintenance . . . And the stand-
ard of perfection in complete car coolability!

Exclusive Hidden Comfort

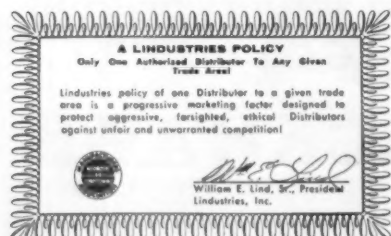
Two additional concealed blowers diffuse a gen-
tle flow of air over the floor area keeping it
pleasantly cool. This new concept in complete
car cooling eliminates uncomfortable concentra-
ted streams of cold air characteristic of side
louvers.

Quietly Recirculates Air In 30 Seconds!

Powerful twin squirrel cage blowers are placed
in front of the coil and pull air over the entire
cooling fin surface. Frostemp cools, purifies, de-
humidifies and recirculates the air in the average
car every 30 seconds!

A Profitable Salesman!

Engineering perfection, beautiful styling, coast
to coast advertising and free dealer aids make
Frostemp for '60 your most profitable salesman!
Price lists and other information, including infor-
mation on Frostemp foreign and economy car
units available now! All inquiries are confidential!



CONTACT:

LINDUSTRIES, Inc.
1041 Fock Street
Fort Worth, Texas 1-3
Phone EDison 2-7933

Name _____
Address _____
Firm _____

Replacement Shock

*Permits greater conformity
of the piston to the cylinder*



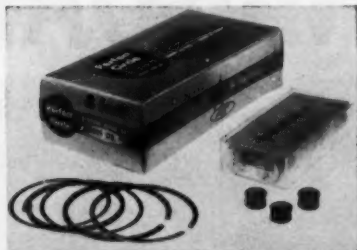
United Motors Service Division
of GM: Improved Delco hydrau-
lic shock absorbers incorporated
for the first time on all 1960 GM
cars are now available. A thin
band of molded nylon around the
sintered iron piston permits
greater conformity of the piston
to the cylinder for better per-
formance and extends the useful
life through avoidance of metal
to metal contact. The new design
also features the new M-3601
fluid offering greater stability at
all temperatures for additional
improved performance, it was
stated. For more information
write: Floyd Lawrence, United
Motors Service Division of GM,
Detroit 2, Mich., or phone TRin-
ity 5-4700.

Valve Stem Seal

Stops oil loss past valve guides

Perfect Circle Corporation:
High-vacuum engines have a
tendency to let oil get by the
valve guides. This is a major fac-
tor in oil consumption. Company
states that it has perfected a

valve stem seal that has proved effective in stopping this type of



oil loss. PC's 2 in 1 Chrome piston ring set features the self-expanding chrome 98 oil ring. For more information write: Perfect Circle Corp., 552 S. Washington St., Hagerstown, Ind.

Auto Drip Cloth

Gives complete floor protection

Pit-Bar Mfg. Company: A new "Garage Valet" auto drip cloth has been announced. Manufactured of vinyl material, the new garage cloth is a large 48 x 72 inch size to give complete floor protection. The new "Garage Valet" keeps garage floors clean. It is easy to clean with a damp cloth. For more information write: S. Barsky, Pit-Bar Mfg. Co., 3311 E. 45th St., Los Angeles, Calif., or phone LUDlow 3-1624.

Parts Cleaner

Requires no heat for cleaning action



Permatex Company, Inc.: Company's immersion-type parts cleaner, that requires no heat for its thorough cleaning action, is now available in a bench-size container. The gallon-and-a-half can holds a gallon of cleaning

compound. A metal basket is provided to hold the parts and to permit draining and recovery of the parts. Company also markets the Cold Parts Cleaner in a one-gallon replenisher can, in six-gallon containers, and in large-capacity drums. For more information write D.C. Adams, Office Sales Mgr., Permatex Co., Inc., 300 Broadway, Huntington Station, L.I., N.Y. or phone HA 1-3800.

Zero Lash Lifters

Available for replacement on all cars and trucks with hydraulic valve lifters

McQuay-Norris Mfg. Co.: A full line of Zero-lash hydraulic valve lifters has been added to the valve train product lines of the company. Used as original equipment on many cars and trucks, Zero-lash lifters are now avail-

Continued on page 92

FROM BLACKHAWK'S LONG RED LIFTING LINE!

SURE-FOOTED GARAGE HORSES FOR EVERY REPAIR JOB!

2 Ton
MODEL AX-2
\$16.50 Pr.



5 Ton
MODEL AX-5
\$23.50 Pr.



7 Ton
MODEL AX-7
\$33.90 Pr.



10 Ton
MODEL AX-10
\$60.50 Pr.

10 Ton
MODEL AX-11
\$121.00 Pr.



2- thru 10-ton capacity GARAGE HORSES

High or low positioning
from 11" to 48"

\$16.50 to \$121.00 per pair

GARAGE HORSE FEATURES:

- Handles . . . "load-locked" for safety
- Sag-proof construction — well reinforced joints for extra safety
- Wide-spread legs for secure footing on any type of floor
- Extra-large saddles for maximum load contact
- Springless construction for extra reliability

GARAGE HORSES USED FOR:

- Freeing jacks for other jobs
- Removing shocks
- Adjusting brakes
- Replacing tail pipes and mufflers
- Installing springs
- Repairing differentials

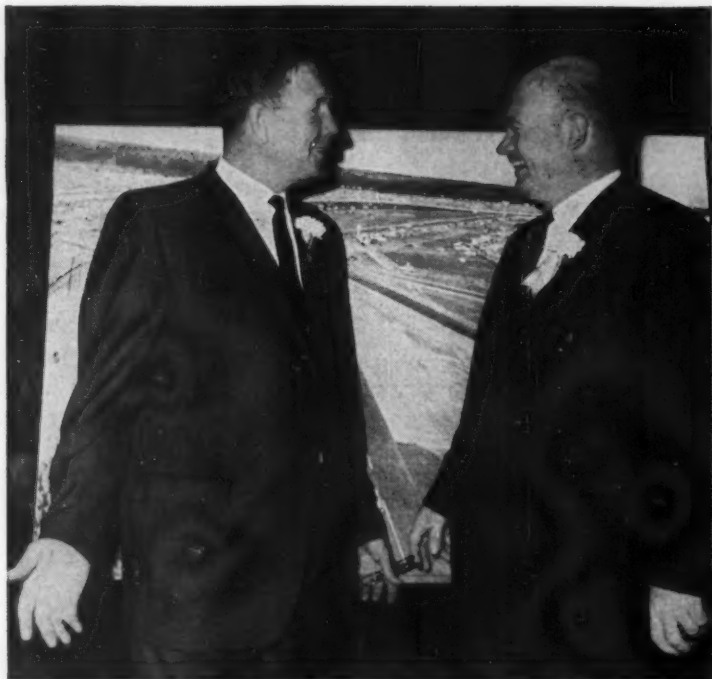
Write for free Bulletin No. J-111



BLACKHAWK®

BLACKHAWK AUTOMOTIVE DIVISION
Dept. J-610, Milwaukee 46, Wisconsin

NASCAR



Mr. William H. G. France, NASCAR president, and Mr. Robert H. Davies, Autolite president, discuss plans for the Autolite NASCAR program.



Late model stocks roar around north side of the high-banked Daytona International Speedway. The pit access road is shown at the right along with telegraph and garage area.



Aerial view of the three-million-dollar two-and-a-half-mile Daytona International Speedway, showing 45-acre lake in center of the infield with Municipal airport in background. The track has already been established as the world's fastest with new record speeds for stock cars, speedway cars and sports cars.

WELCOMES AUTOLITE



Sensational photo finish of the 500-mile NASCAR International Sweepstakes race at Daytona International Speedway, February 22, 1959, showing how Car No. 42 nosed out Car No. 73. Car No. 48 was a lap behind at the finish.

Autolite will participate in the Daytona Speed Weeks and at NASCAR sanctioned events throughout the country

Here's the biggest promotional boost yet for Autolite Spark Plug Dealers everywhere! Now Autolite Spark Plug Dealers will be able to capitalize on the intense excitement and interest generated by a sport that attracts more spectators than professional baseball, including the World Series.

Autolite will begin active participation in NASCAR with the 11th Annual NASCAR Safety and Performance Trials and the 2nd Annual Daytona International Speedway Winter Classics, January 30 through February 14. Autolite will participate

in all NASCAR activities at Daytona Beach, Florida, and at NASCAR sanctioned events across the nation. In the limelight will be cars equipped with Autolite Spark Plugs.

Autolite NASCAR prizes, plus a series of special regional trophies, will dramatize the leadership of Autolite Spark Plugs in 1960 and for years to come. And with each award the Autolite Spark Plug Dealer can be sure that Autolite NASCAR participation is building sales for him!

THE ELECTRIC AUTOLITE COMPANY • TOLEDO 1, OHIO



AUTOLITE® SPARK PLUGS

New Products

Continued from page 89

able for replacement on all cars and trucks equipped with hydraulic valve lifters. According to the company advantages claimed for Zero-Lash lifters are the patented combination check valve spring and retainer housing that assures closing of lifter check valve. Pre-lubrication assures that the lifters are ready

for instant use. The bottom of the tappet is Parko-lubrized for initial run-in protection. For more information write: Noble Hale, Mgr., Adv. & Sales Promotion, McQuay-Norris Mfg. Co., 2320 Marconi Ave., St. Louis 10, Mo.

Cooling System Indicator

Fits both long and short necks

Stant Mfg. Co., Inc.: A new ST-

255 universal precision cap and cooling system tester is being marketed. The ST-255 fits all radiator necks. It clears all obstructions and fits both long and short necks, company states. Other features are: chromium plated brass pumping cylinder, chromium plated high pressure die casting end cap and body, cam lugs, and cast adaptor. For more information write: Glenn Schaefer, Stant Mfg. Co., 1620 Columbia Ave., Cornersville, Ind.

A NEW, FASTER WAY TO REMOVE AND INSTALL bayonet type SHOCK ABSORBERS!

NO. 2200 SHOCK ABSORBER TOOL
3 TOOLS IN ONE

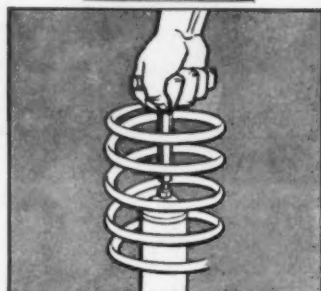


At last here's an answer to quick installation and removal of shocks on all General Motors, Ford and Chrysler make cars. This unusual tool licks the problems of narrow clearances . . . eliminates skinned knuckles . . . helps beat job rates. It's a reliable tool. Ask your jobber.

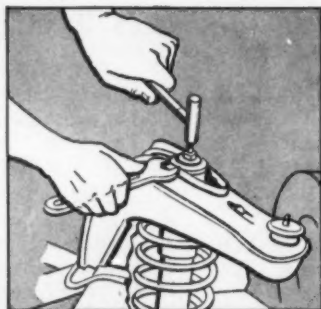
See us at
the IASI
Show—
Booths
3941-
3943

MECHANIC'S
NET

\$1.95



Screw tool on shock — pull through coil spring.



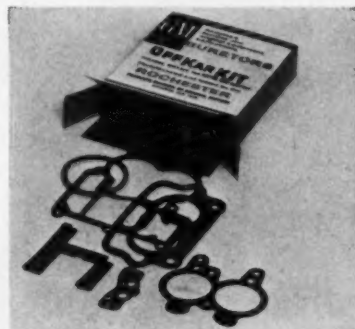
T-end sockets hold shock rigid while tightening or loosening retaining nut. Openings are oblong to fit the bayonet.

Herbrand Tools

HERBRAND TOOLS • DIVISION OF THE BINGHAM-HERBRAND CORP., FREMONT, OHIO

Carburetor Repair Kit

Contains gaskets and light repair parts



Rochester Products Division and United Motors Service Division of GM: A new carburetor clean-out and light repair kit for Rochester-equipped GM cars is announced. The new Off-Kar Kit provides all necessary gaskets together with light repair parts including needle and seat, pump plunger and boot, clips, float gages and cotter pins, also additional parts as needed. For more information write: Floyd Lawrence, Rochester Products Div. and United Motors Service Div. of GM, Detroit 2, Mich., or phone TRinity 5-4700.

Lubricating Compound

Lubricant with silicone silences and freeze-proofs

American Grease Stick Co.: Sil-Glyde lubricating compound with silicone for auto and home is now
Continued on page 94

For piston power... piston service... piston profits

GO THOMPSON PRODUCTS ALL THE WAY!

Leadership in pistons and piston service belongs to Thompson Products. You recognize it in such Thompson piston names as STANDARD ALLOY, STEEL-BELTED, POWERGROOVE—and now in the exclusive new Thompson POWERFORGED aluminum piston.

The great new Powerforged piston is *forged*... *not cast*. And every claim ever made for it was proved in 5 money-winning cars in the 1959 Indianapolis "500". Every Powerforged piston matched the increased loads of the world's most powerful engines.

Thompson's exclusive forging process literally pounds aluminum slugs into piston forms—increases strength by producing a grain flow in the metal. With no increase in weight, the Powerforged piston is up to 70% stronger and 600% tougher than conventional cast aluminum pistons... and they balance perfectly when used for replacement. Furnished tin plated in finished sizes.

For piston power, piston service, piston profits... go Thompson Products—all the way.

Sold thru the world's finest jobbers



POWER FORGED

THOMPSON POWERFORGED PISTONS are forged—not cast. They are the same weight as conventional pistons, yet they are 70% stronger—600% tougher. Powerforging produces a grain flow in the metal, thereby increasing piston strength.

POWERFORGED "TOWER" CONSTRUCTION increases strength where it is needed—in the head and at the piston pin bosses. The heavier head and "tower" also help dissipate heat faster... and the design permits flexibility in the skirt area.

Thompson Products
Replacement Division
Thompson Ramo Wooldridge Inc.
Cleveland 3, Ohio

New Products

Continued from page 92

being sold. It is a lubricant for rubber, metal, wood, plastics. According to the company it can be used to silence and freeze-proof car door, truck and hood weatherstripping; to eliminate hidden squeaks from convertibles and station wagons; to weather-proof ignition systems on boats and cars and prevent shorts; to

make sliding surfaces work easier and stop squeaks. For more information write: Ameri-Grease Stick Co., 2651 Hoyt St., Muskegon, Mich.

Air Driven Sander

Does many Jobs formerly done by hand

National-Detroit, Inc.: Improved models of the Model "DA" Air Driven Sander are being intro-

duced. "Dual-Action" Sander is used in the autobody paint shop



to do many tasks formerly done by hand. It is used for sanding, prime, surfacer, and putty, removing rock chips and scratches in color coats without going through the prime coat. Also sanding for repainting by removing gloss or oxidized paints. For more information write: National-Detroit, Inc., 2810 Auburn St., Rockford, Ill.

Starting Pack

Has built in battery charger



Willard Storage Battery Division: A new starting pack, designated as Model WSP, is now being marketed. According to the company the unit's outstanding features are a 15 foot cord for remote control, and safe starting. The company also states that the starting pack has a built-in battery charger. For more information write: J.S. Harbison, Willard Storage Battery Div., P.O. Box 6266, Cleveland 1, Ohio.

Continued on page 99



SCORE LIKE A CHAMPION !

By every count . . . Sales, Profit, and Customer Satisfaction you'll make a striking success with L & S Bearings . . . the PROFIT line . . . the COMPLETE line! There's an L & S Bearing for every automotive replacement job, including imported cars. Check the new, comprehensive L & S catalog and see for yourself.

Visit our booth #4144
I.A.S.I. Show, Coliseum, New York City
February 10, 11, 12, 13



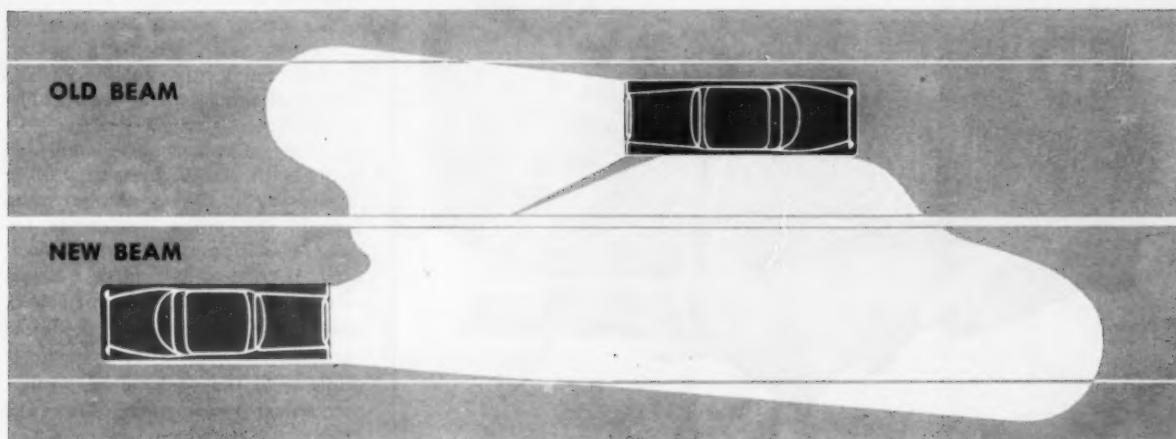
L&S BEARINGS

L & S BEARING CO. P. O. BOX 995 OKLAHOMA CITY, OKLAHOMA

More Than 50 Million Two Headlamp Cars need **Vision-Aid Headlamps** with

SPOTLIGHT LOW BEAM

**Greater visibility against oncoming
lights makes night time passing safer for all
two headlamp cars and trucks!**



Old Range of low beam in old-type 7-inch headlamps is no longer adequate. As vehicles approach, the opposing headlights create a glare that tends to cancel out the visibility of both

6-V PASSENGER CAR **6006**
12-V PASSENGER CAR **6012**
12-V HEAVY DUTY **6013**



drivers—causing a critical “blind spot” during passing.

New TUNG-SOL 6000 series spotlight low beam concentrates more light farther along the right side of the road, away from oncoming lights... provides better visibility in critical passing zone. Even against “brights” more light gets through. Passing is accomplished with far less eye strain and hazard. In effect, spotlight low beam headlamps bring more of the four-headlamp efficiency to all two-headlamp cars.

SELL



TUNG-SOL®

THE COMPLETE LIGHTING LINE

Automotive Products Division

TUNG-SOL ELECTRIC INC., NEWARK 4, N. J.

New Carburetor Continued from page 53

a separate passage with a well jet from the float bowl to prevent any interference from the high-speed circuit. The float bowl, low-speed circuit, and high-speed circuit passages are fully vented by a balanced vent tube in the air-horn.

The high-speed circuit fuel flow is controlled by a metering rod and jet, in conjunction with an externally adjusted high-speed needle

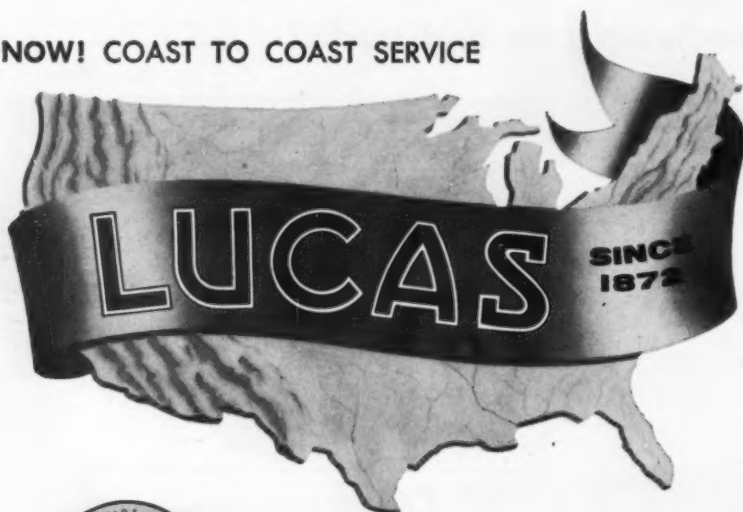
valve. They each receive their fuel supply from the float bowl and are located in the bottom of the float bowl. To adjust the high-speed needle valve, allow the engine to warm-up to normal operating temperature. Set engine speed to approximately 30 mph., road speed. Screw in on high-speed needle until the engine begins to drop in rpm; then back out needle until highest

rpm's., are reached on the engine.

Pump circuit is of the wet type, spring-loaded, delayed-action design that has proved so successful in the past. A sleeve type wire mesh strainer is provided to filter the fuel from the float bowl before passing into the check valves. Intake ball and discharge flat check valves are located in the same passage as the strainer. All three items are removed easily after removal of the passage plug. The pump discharge jet is positioned so as to direct its stream of metered fuel between the primary and secondary venturi. This point of discharge gives the best distribution of the fuel into the air stream. An adjustment is provided on the pump arm along with an adjustment for the high speed metering rod.

The Choke circuit is manual in operation, with a offset, spring-loaded choke valve to prevent excessive choking of the engine. The choke is provided with a fast idle cam arrangement interconnected with the throttle to prevent stalling of the engine during the warm-up period. The major variations between carburetors for the Volkswagen, Hillman and English Ford is evident in the choke linkage hookup, also in the jet calibrations. These carburetors offer a very realistic solution to the problem of prompt economical replacement. They are simple to install, easy to service and they will assure customer satisfaction with your abilities as a expert tune-up operator.

NOW! COAST TO COAST SERVICE



**GENUINE LUCAS
ORIGINAL EQUIPMENT
REPLACEMENT PARTS**

GENERATORS
STARTERS
DISTRIBUTORS
COILS
BATTERIES
LAMPS
WINDSHIELD WIPERS
REGULATORS
HORNS
GIRLING BRAKES
GIRLING
SHOCK ABSORBERS

FASTER THAN EVER!

Wherever you are . . . whatever you need . . . your local Lucas factory branch ships you the genuine Lucas original equipment you want . . . **FAST!** Expanding every day, Lucas is right on the job to help you fill America's growing demand for the world's finest electrical equipment and accessories for British cars.

Represented in the United States by

LUCAS ELECTRICAL SERVICES, INC.

501-509 West 42nd Street, New York 36, N. Y.

NEW YORK 501-509 West 42nd Street • LOnacre 3-3464

CHICAGO 5001 West Belmont Avenue • AVenue 2-1190

HOUSTON 6055-6057 Armour Drive • WAlnut 8-5255

JACKSONVILLE 400 S. Edgewood Avenue • EVergreen 8-7607

SAN FRANCISCO SOUTH 171 Beacon Street • JUne 9-4242

LOS ANGELES 5025-5029 W. Jefferson Blvd., P.O. Box 78508
REpublic 1-7211





Arvin

America's *most experienced* muffler manufacturer now puts you in a new position of strength for selling in today's highly-competitive after-market . . . with an all-new line of mufflers specifically planned for the replacement market.

Turn this page for the sales-making facts.





Check the facts! See why Arvin is your new Opportunity Line!



Arvin



an all-new line backed by the industry's greatest production experience . . . plus brand acceptance

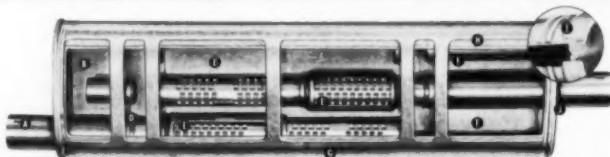
ARVIN
OFFERS THIS
NEW SALES
CONCEPT!

Arvin—a solidly-established, major manufacturer with the production experience of more than 115,000,000 mufflers, the production capacity of 8 automotive plants, the consumer acceptance of a nationally-known brand name—Arvin takes this important step forward to help you *get* the muffler business that *should* be yours . . . from prospects who are already your customers for other parts

and service! And Arvin has done it with a complete line of quality mufflers, competitively-priced and backed by complete promotion! Check the facts on the all-new, all *aluminized* or *zinc-coated steel* Arvin line, below. For further details on how you can gain extra sales, extra profit with the Arvin Muffler sign at *your* curb, write your jobber or direct to Arvin. No obligation. Write today!

- A Slotted connections for ease of service and leak prevention
- B Chamber and tuning tube to eliminate intermediate frequencies
- C Quadra-Crimped heavy duty heads Zinc-Coated

- D Aluminized or zinc-coated support or reversing baffles
- E Chambers for eliminating high level frequencies
- F Chamber and tuning tube to eliminate low level frequencies
- G Zinc-coated shell



- H Asbestos-wrapped for added life and better silencing
- I Enlarged view of lock-seamed head, shell, asbestos and outer wrap—an exclusive Arvin design feature
- J Nipple inlet and outlet seam-welded all around

ARVIN
OFFERS THESE
ADVANTAGES!

FULL LINE—Greater Inter-Changeability! The complete, new Arvin Muffler line gives you the greatest inter-changeability in the industry among models for 1940 to 1960 U.S. passenger cars and trucks! Your Arvin jobber maintains complete stocks at all times, so that he can handle your order for any particular muffler, pipe or accessory *promptly*—get the merchandise to you *fast* to help prevent “lost” sales.

PRE-SIZED TUBING—Faster, Easier Installation! All Arvin Mufflers come to you *pre-sized* for perfect muffler-to-pipe fit *without* crimping,

pinching or bending! And Arvin pipes come to you *Arvinized** with a special protective, anti-corroderent coating that keeps them factory-new in appearance, clean and easy to handle!

PRE-TUNED MUFFLERS—Perfect Performance! Every Arvin Muffler is pre-tuned for perfect performance on the make and model cars for which it is designed . . . without tuning or adjustment after installation! Your time per installation is reduced—and your customer is assured *maximum* sound suppression, *minimum* back-pressure!

AND ARVIN
GIVES YOU
ALL THIS, TOO!

LOCAL FOLLOW-THRU—Powerful National Advertising! Remember, too, that powerful Arvin national advertising tells-to-sell the Arvin story to prospects in *your* community . . . and free Arvin ad mats, radio announcements, curb signs, window

and wall banners and other promotion tools and plans help bring 'em to *your* place of business! Small wonder that the Big Swing is to Arvin . . . your *opportunity* line in mufflers! Check the advantages Arvin holds for you with your jobber today!

FREE!

You can get these famous Arvin Consumer Products as a gift! Free Gift Certificates for these products are packed at random into cartons of every bulk muffler shipment sent out from the Arvin plant. They're for you, the installer, exclusively!



Portable Radios



Outdoor Grills



Phonographs



Leisure Furniture

See us at the ASIA Show, Feb. 10-15th
2nd floor, N.Y. Coliseum



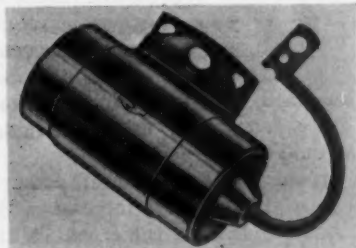
ARVIN INDUSTRIES, INC.
COLUMBUS, INDIANA

New Products

Continued from page 94

Automotive Condenser

Unique process makes it vibration-proof and water-proof



Standard Motor Products, Inc.:

A new automotive condenser, called the Shockmaster has been developed. It is claimed that its unique "total encapsulation" process makes the condenser impervious to vibration and moisture. A combination of welded internal leads, internally soldered ground-tab and a 1000-volt shock test for each unit also makes it almost impossible for the Shockmaster to break down electrically, company states. All of Standard's "Blue Streak" condensers are now made with the Shockmaster features. For more information write: J. Fred Kenny, Gen. Sales Mgr., Standard Motor Products, Inc., 37-18 Northern Blvd., L.I.C. 1, N.Y., or phone EXeter 2-0200.

Silicone Lubricant

Prevents squeaks and sticking of surfaces



Dow Corning Corporation: Dow Corning 4X is a silicone mate-

rial with properties that eliminate problems, such as squeaks, sticking, freezing, corrosion, and electrical or moisture leaks in new and used cars. According to the company, this silicone lubricant and preservative is water repellent and has excellent electrical insulating properties. Dow Corning 4X is nonmelting and nonfreezing. Simply spray or wipe on. For more information write: Charles J. Lenz, Account

Supervisor, Advertising Dept., Dow Corning Corp., Midland, Mich., or phone Temple 2-2371.

Wheel Balancer

Fits imported and American compact cars

John Bean Division, Food Machinery & Chemical Corp.: An on-the-car wheel balancer that fits large, small, imported or new

Continued on page 108

\$300⁰⁰
A WEEK
SERVICING
RADIATORS!

Inland Trained
Radiator
Repairman
Soldering
Radiator



"Our INLAND Radiator Department brings us an average of \$300.00 A WEEK! (Over \$15,000 a year!) Wish we had installed the equipment years ago!" — Douthitt-Carroll-San Chez Co., Memphis, Tenn.

\$10,000 to \$20,000 A YEAR ADDITIONAL VOLUME IS COMMON! "\$16,750 in one year!" — McRill's Auto Repair & Radiator Service, Twin Falls, Idaho. "\$18,000 in one year!" — Clough Auto Parts, Storm Lake, Iowa. Radiator servicing brings more profit per sq. ft. than any other activity in the service area!

20 to 30 MILLION RADIATORS NEED SERVICING YEARLY! Tests prove 83% of all radiators over a year old are partly plugged. Inland equipment shows customer his radiator needs cleaning — is designed for fast easy production methods — stays neat and clean.

Inland, world's largest radiator equipment manufacturer, offers the complete package — Equipment, Training, Merchandising, "Pays-For-Itself" Purchase Plan.

FREE BOOK!

New free 48-page book "Blueprint for Profits" shows equipment, training course, "Pays-for-itself" purchase plan and experiences of other operators. Take a minute and mail the coupon now.

INLAND MFG. CO.

1108 Jackson St.
Dept. MA-1, Omaha 2, Nebr.

MAIL COUPON TODAY

INLAND MFG. CO., Dept. MA-1
1108 Jackson St., Omaha 2, Nebr.

Please send new free book, "Blueprint for Profits."

FIRM _____ (PLEASE PRINT)

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY _____ TITLE _____

If dealer, make of car sold _____
Are you now operating a radiator Dept. ☐ Yes ☐ No

Automotive Outlook Continued from page 54

And, in 1960 fifty-eight different auto lines will be available in the standard makes of cars. Parenthetically, over 60 foreign car manufacturers are in our market.

All of this means we are seeing an amazing reversal of a trend of some years' duration.

What we have witnessed up 'til this year has been a dwindling in the number of makes of cars which have survived and were still available.

In 1960 this trend is completely reversed, and suddenly we have a widely expanded variety of makes, models and sizes of automobiles being offered to the American public.

New Tools and Equipment

All three of the new compact cars will mean new parts, new tools and equipment for manufacturers to make and for wholesalers, car dealers and service outlets to stock.

Look for the most competitive

year in automotive history in 1960, and a total average passenger car production per year of 6,700,000 units between 1960 and 1965. From 1965 to 1970 average annual passenger car production will be approximately 7,400,000.

Before leaving the subject of Automobiles, we should mention some fantastic things are ahead. They range from cars that glide on cushions of air to high speed bullet-like cars which will travel controlled by electronic guiding devices on super highways from one part of the country to another. Even now, working models of many of these "futuristic" cars are being tested. Tomorrow they may be the common accepted means of travel.

During the past ten years the tremendous size and growth of the passenger car market has tended to dominate the automotive distribution picture. But pushing up to take its place beside the passenger

car market is the rapidly expanding truck market. One out of every six automotive vehicles is a truck and they travel one out of every five miles.

Heart of the trucking market is 31,000 self-serviced fleets that operate over 3¼ million vehicles. These fleets are volume operators. They roll up more than 52 per cent of all highway transportation mileage each year, and fleet trucks require four times more servicing than average trucks.

If the past ten years tell us anything, then we can forecast with certainty that as the trucking industry expands, the fleet market—vehicles and mileage—will expand at an even greater pace. And there is no question that the trucking industry will expand, for trucks are increasing in number at a much faster rate than cars. There are forecasts of an 82 per cent increase by 1975, which means that about 20,000,000 total trucks will be on our highways by that time.

Now let's turn to Automotive

NEW!

McQUAY- NORRIS

SLO-CHROME

Service Retailing which will see sweeping changes in the coming years.

We have come to see the distribution of parts, accessories, chemicals and supplies through department stores and chain stores including food supermarkets.

All of the Car Companies are placing increased stress on preventive maintenance programs and intently studying the idea of setting up exclusive factory service centers as the answer to provide skilled service.

These programs, obviously, won't work to the same degree in smaller communities because they do not lend themselves to the pooling of service. More and more of our cities, however, are growing together, and as that condition expands it makes this new service center pattern practical in more locations.

Look for more direct selling through local well-advertised outlets for some more of the products now bought through wholesalers.

The trend already established by Midas in the muffler business, Rayco in the seat cover business, and local specialized brake shops, will continue.

Look for an increase in the number of types of automotive specialized service outlets. These will be brought on by evolution in cars and complexity of service. Automatic transmissions are a case in point.

Look for more gasoline service stations to become general service shops through the addition of full-time mechanics. There are now over 50,000 service shops of this kind. Although they account for less than 10 per cent of the automotive service volume today, that percentage will increase, but gradually.

Oil companies will augment their T.B.A. lines to include products not now being sold. Practically every major oil company has a program now slanted in that direction which includes broadening the services and products offered

by their outlets.

The nub of all this, as far as manufacturers of automotive parts, accessories, supplies and equipment are concerned, is increased necessity for strong sales, advertising and merchandising programs directed at the automotive repair shop level, which includes car dealers, general repair shops, specialty shops and service stations doing repair work.

The extensive research done by MOTOR AGE to determine where the service market has shifted was dictated by the realization that exact coverage of the market for automotive service work is absolutely essential if a manufacturer is to maintain his share of the expanding market in the face of all the different forms of encroaching competition coming into the picture.

We look for an increase in the number of all types of automotive service outlets to a level of approximately 386,000 by 1971, and increase of 10,000, or an average of 1,000 a year.

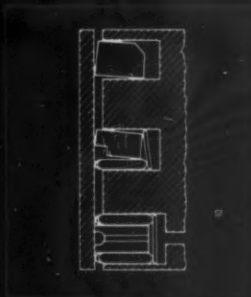
SLO-CHROME MEANS OPERATING ECONOMY



SLO-CHROME—exclusive with McQUAY-NORRIS—is a special, unhurried plating process whereby dense, fine grain chrome is carefully applied to assure immediate and permanent oil control. SLO-CHROME is more expensive to produce than other types of plating, yet costs you no more. SLO-CHROME is used on all steel rails, and on top chrome rings.

SEVEN WIPING EDGES

The famous Leak-Proof piston ring set (including the outstanding "400" oil ring) has seven (count 'em) wiping edges. No other ring set has so many wiping edges to save your customers gas and oil.



THEY STAND OUT
BECAUSE
THEY STAND UP!

McQUAY- NORRIS

CHROME CONTROL

LEAK-PROOF

PISTON RINGS

Highways Continued from page 38

The funds that are missing are gone, for all time, from the road-building scene.

The amount involved is far larger than the public may suspect. From 1934 through 1957, the states put into programs not connected with good roads a staggering \$4.7 billion. This amount was counted up by the National Highway Users Conference, located in Washington, D.C.

Add to that sum another \$300 million which the Bureau of Public Roads finds was diverted from highway work in 1958. That brings the total to \$5 billion within a span of 25 years!

Putting all the highway taxes into street and road projects eases the job of the highway planners. They can work best when they have a fair assurance as to the funds they can depend on in succeeding years.

Highway planning that is performed piecemeal—a few miles of roadway here, a new bridge there—

is costly. Road links that were started five years ago to relieve traffic jams may lead directly to bottlenecks now. Careful planning, backed up by enough money to get the job done, could prevent this wasteful approach to roadbuilding.

Using the money earned from fuel and other automotive taxes to update the highways can reduce the total tax burden. Here's why: A number of states which divert highway taxes take money out of general funds pay for road projects. This leaves a gap in general funds which must be filled if the states are to continue non-highway projects.

Often, the gap in general funds is filled by raising taxes. One tax hike, though, is rarely enough. As higher tax revenues come in, the states may find it easy to steer even more highway-use taxes into other programs. That puts the states back where they started—taking money out of the general funds to pay for their roads.

Twenty-seven states have amended their constitutions so as to dedicate highway taxes to highway purposes. These are Alabama, Arizona, California, Colorado, Georgia, Idaho, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, North Dakota, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Washington, West Virginia, and Wyoming.

In other states, backers of highway taxes for highway building have been urging similar amendments. But they're finding the going rugged. Even keeping the present anti-diversion amendments on the books isn't easy.

California, Georgia, North Dakota, Oregon, and Texas discussed plans in 1959 to repeal these amendments. A law enacted in Missouri puts into the state general funds the receipts from driver license fees. This law went on the books despite the anti-diversion amendment to the Missouri constitution.

The federal government, of

McQUAY- NORRIS

"CUSTOM-CRUSH" BEARINGS



PERFECT
SADDLE FIT

3300 EK

course, is not setting the states a worthy example in the handling of highway-use taxes. In the 12 months that ended June 30, 1958, the government took in more than \$3.5 billion in automotive and related taxes. About 60 per cent, or \$2.1 billion, was earmarked for the highway trust set up in 1956. But more than \$1.4 billion was steered into general U.S. Treasury funds.

Congress didn't become alarmed at the loss of highway tax money so long as the trust fund took in more dollars than it was paying out. The fund, in the year ended last June 30, had a surplus of \$524 million. That margin of income over outgo was to disappear, though, by mid-1960, the lawmakers learned. Unless more money was earmarked for the fund, there was to be a deficit of about \$500 million in 1960.

Officials blame these short-range financial woes of the trust fund on congressional action in 1958. There was strong sentiment in that year for boosted highway building to offset the recession.

The pay-as-you-build portion of



Ralph Tichenor, sales representative of Walker Marketing Corp., presents \$1500 check to Ed Cole, Grand Rapids, Mich., winner of Walker's Big Bonus contest. Looking on are Joe Cullin (left) and Don Pomeroy (right).

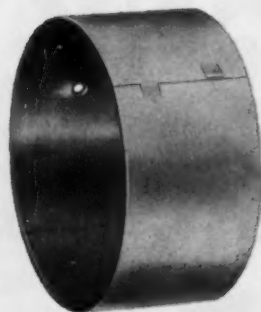
the highway law was set aside by the Congress. Higher apportionments of federal funds were made to the states for highway programs, without a provision for added financing.

In 1959, Congress acted to find more money for the fund. It went part-way with the White House request for a hike of $1\frac{1}{2}$ ¢ per gallon in the federal gasoline tax. The vote

was for a 1¢-per-gallon rise, to last until the middle of 1961.

At that time the tax rise is to be replaced (unless Congress changes the law) by the earmarking of some automotive excises for the trust fund. Going into the fund are to be half the revenues from new-car taxes, plus an amount equal to five-eighths of the tax on parts and accessories.

NEW! CUSTOM-CRUSH* MEANS PERFECT SADDLE FIT, TOTAL HEAT TRANSFER



CUSTOM-CRUSH is just one of the many features that make McQuay-Norris Bearings stand out. Longer engine life, less down time are assured. CUSTOM-CRUSH means perfect saddle fit, complete heat transfer.

* THE SPECIAL McQUAY-NORRIS CRUSH ALLOWANCE AT THE SPLIT LINES ASSURES PERFECT SADDLE FIT.

ORIGINAL PRODUCTION BEARINGS HAVE A UNIFORM AMOUNT OF CRUSH BECAUSE ALL PARTS ARE NEW. REPLACEMENT BEARINGS SHOULD HAVE A SPECIAL CRUSH AT THE SPLIT LINES TO COMPENSATE FOR SADDLE WEAR AND DISTORTION.

NEW!

McQUAY NORRIS "Alum-lined" engine bearings are available for late model engine applications.

MORE THAN 6400 NUMBERS of all types—a bearing for every need.

Junior Car Sales Continued from page 45

cessfully sold the Rambler and the Lark.

To accomplish these profitable objectives, Junior car dealers must consider:

1.) Using a separate selling area for the Junior cars. By this, we mean an area that physically divides one size from the other. In so doing, you allow the customer, or prospect, to qualify himself immediately. If he enters the Junior car area he has shown his interest in the Rambler (in our case). On the other hand, if he enters the Oldsmobile area, we know he's an Olds prospect.

Similarly, if a fellow drops into your used car lot, chances are very unlikely that you can upgrade him all the way to a new car.

The importance of separate selling areas is the wiping away of customer confusion. Let him stand in front of both Senior and Junior cars—he compares size, price, and all other features of the cars—then he begins to wonder—and chances

are, he walks out without buying either.

2.) Separate selling effort must also be given consideration. Confusion is compounded *when the salesman attempts to tell two different sales stories*. Men must be trained in special techniques to sell the Junior car . . . because they should be held responsible for maintaining the percentage of price class expected of the Junior car in any given market place.

At the same time, competition between the Junior and Senior car sales forces must be maintained, the same as the competition among the different divisions of our car factories. This has added to their success, both in volume and profit.

And, the pay plan should be different. It should be based on the amount of gross profit retained on either the Junior or Senior lines; plus an incentive to trade other makes than that which the dealer sells.

You can hire men and train them.

But, you can't hire people to think for you. The dealer must be the one who calls the shots, makes policy, supervises the management of his dealership. And, only the dealer is responsible for net profit.

Competition and the buying public, more or less, establish the gross profit in car sales. Only the dealer can control expenses which determine profit or loss.

Main Factors in Selling

Here are the main factors in the Profitable Selling of New Cars in the order of their importance:

1. The dealer's attitude. It must be positive at all times. Positive in thinking, positive in action. From that attitude your entire staff takes its lead.

2. Know your competition. You've got to live with your competition so you might as well know them and how they operate.

3. Maintain a sales force with the know-how and the desire to sell the product and the dealership—not price.

Continued on page 110

...AND ALL OTHER McQUAY-NORRIS PARTS IN THE
COMPLETE LINE ALSO HAVE SPECIAL FEATURES
SPECIFICALLY DESIGNED FOR REPLACEMENT USE

McQUAY- NORRIS



Transistors Continued from page 47

only be made hereafter to the outer orbit.

Another example of an atom is the copper atom, with 29 protons and 29 electrons. The difference in the number of electrons and protons results in the variations we know as elements. The make up of the atom is varied in each different element because of the changes in the number of protons and electrons.

The electrons in the outer orbit of the atom can be made to move away from their orbit quite easily because the binding energy holding them to the atom has less effect in the outer orbits. This movement of what we call free electrons is the flow of electrical energy.

Any element with four or less electrons in the outer orbit can be made to give up these electrons with a minimum of effort. Elements containing more than four electrons in the outer orbit indicate that the nucleus binding energy retains the electrons more securely in place.

Material, such as copper, silver

and aluminum, which have less than four electrons in the outer orbit, are called conductors because of the ease with which the outer orbit electrons can be removed.

Material having more than four electrons in the outer orbit is called an insulator.

Unusual Electrical Properties

An interesting condition arises when the outer orbit of a material contains only four electrons. Germanium is just such an element. With just four electrons in the outer orbit it is neither a good conductor nor a good insulator. Mixing certain other elements with Germanium produces a material possessing some very unusual electrical properties.

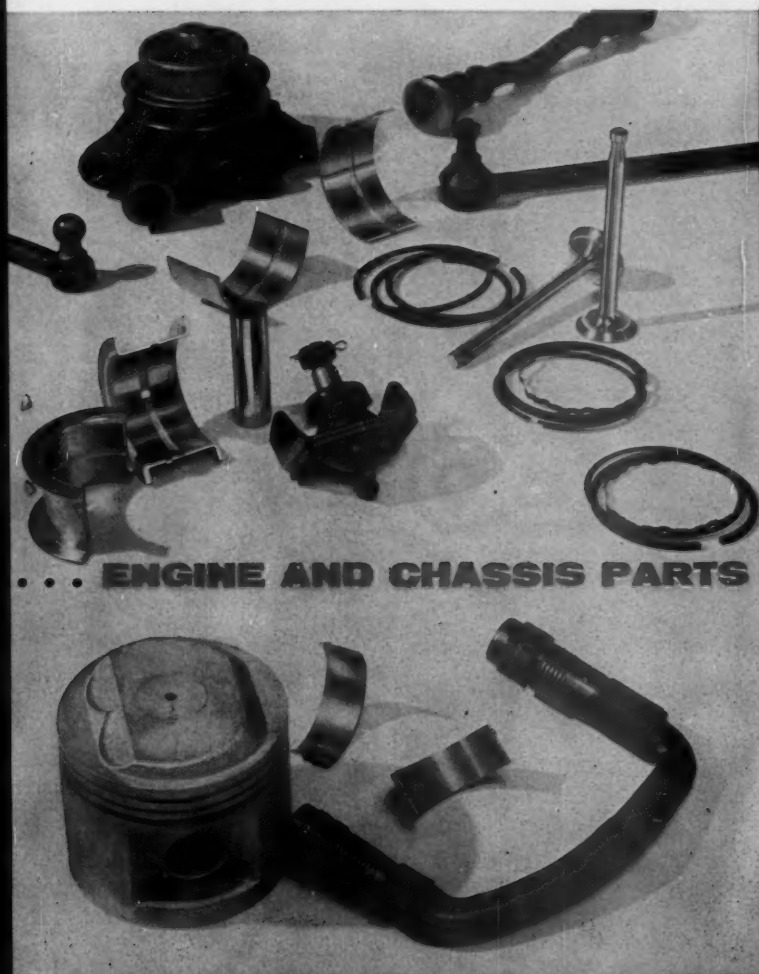
When a group of Germanium atoms are combined in crystalline form, the result is called "co-valent" bonding. It means that the electrons in the outer orbit of one atom combine with the electrons in the outer orbit of another atom. This

then results in each atom effectively having eight atoms in its outer orbit. This produces an excellent insulator because there are more than four electrons in the outer orbit of each atom.

When antimony, which has five electrons in its outer orbit is combined with germanium, co-valent bonding occurs, but there is one electron left over. This free electron can be made to move through the material easily. Since combining antimony and germanium leaves an extra electron the material is called "N," or negative type material.

When Indium, which has only three electrons in its outer orbit is added to Germanium there is a deficiency of one electron in the outer orbit during co-valent bonding. This deficiency creates an empty space in the outer orbit, which is called a "hole." Since an electron is a negative charge of electricity, the hole is considered to be a positive charge of electricity which is free to move. This combination of germanium and indium is called "P," or

Continued on page 110



... ENGINE AND CHASSIS PARTS

EXAMPLES:

- McQuay-Norris aluminum alloy pistons have beefed-up heads to stand up under modern high compression operation, and cam-ground skirts to provide constant clearance for quiet operation and oil control.
- McQuay-Norris idler arm assemblies are produced to extremely close tolerances, then are size-grouped to give even closer control of tolerances, thus assuring snug fit and smooth operation.

They stand OUT because they stand UPI

McQUAY-NORRIS
Manufacturing Co.


ST. LOUIS
TORONTO



Introducing the
CARTER Zip PUMP
a complete new line of
Quality Plus Fuel Pumps

HERE'S WHAT'S IN IT...



DIVISION OF  INDUSTRIES INCORPORATED
ST. LOUIS 7, MISSOURI

. FOR YOU



MORE OUTSTANDING FEATURES! Yes, more features than you can find on any other fuel pump. The only real progressive changes made in fuel pumps in 27 years were made by Carter. For example, the Carter Zip-Pump is cast of modern lightweight aluminum instead of zinc—for extra strength and more heat resistance. The weight difference alone will surprise you. And our 'rolling loop' scalloped diaphragm gives motorists maximum protection against vapor lock. There are other outstanding features such as the 'sliding shoe' that prevents wear of the pump lever or the cam on the cam shaft. Call your Carter supplier *today* and get the complete story on the finest fuel pump available anywhere.

CARTER
CARBURETOR



Cut costs, speed work with B&D accessories



COMPLETE IMPACT
WRENCH KIT



SOCKETS



RIGHT ANGLE
HEAD



CHUCKS

When you push your B&D Impact Wrench over a nut you're sure of one thing—all the turning power built into the husky

Black & Decker tool is going to go to work to spin that nut out fast.

The reason: you're using B&D accessories . . . sockets, chucks, right angle heads . . . to get the most out of your tool.

Call your local distributor today for the accessory you need. He stocks 'em all.



Black & Decker



New Products

Continued from page 99

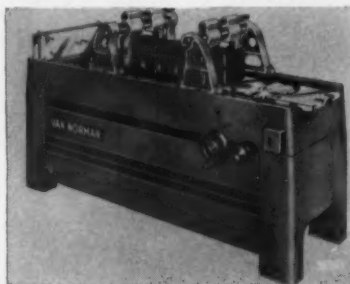
American-made compact cars has been announced. Adjustable legs permit the new on-the-car balancer to fit 12, 13, 14, 15 and



16-inch wheels, eliminating the need for separate adapters for each wheel size, states the company. Micrometer adjustment provides accurate centering of the balancer on the wheel. The portable spinners are lightweight and easy to handle. A special mounting permits tire expansion during rotation. The spinners are moved easily on rubber wheels. For more information write: Harry Schaefer, Auto Dept. Mgr., John Bean Div., Auto. Dept., 1305 S. Cedar St., Lansing, Mich. or phone IV 4-9471.

Rotary Broach

Resurfaces in three fast and easy steps



Van Norman Machine Co.: A new, fully automatic "Rotary Broach" that resurfaces cylinder heads, engine blocks and similar work in three quick, easy steps has been introduced. Three steps

give maximum operating speed with the new "Model 570" Rotary Broach. Work is set up on the loading table, the micrometer up-feed control set for required positive stock removal, and the automatic traverse feed started. The machine automatically shuts off at the end of the traverse. The Model 570 requires only 17 sq. ft. of machine space. The new machine features a built-in loading table to permit fast, top-side set-ups directly from machined surface of work. For more information write: Van Norman Machine Co., 3640 Main St., Springfield 7, Mass.


Painting Equipment

Spray gun cup hangs on hook while painter sprays



Binks Mfg. Co.: According to the company spray painting equipment designed with the automotive painter and refinisher in mind is being marketed. For complete repainting jobs, Steadi-Grip units and the siphon cup units are available. With the Steadi-Grip unit, the company states, painter does not have to carry the weight of the cup as he works. The cup is hung on a nearby hook, and the painter is free to move about unhampered. This arrangement also permits him to turn the gun as needed to paint under-surfaces and hard-to-reach areas. For more information write: Binks Mfg. Co., 3114 Carroll Ave., Chicago 12, Ill.

Continued on page 116



This is the only Impact Wrench

that has the GUTS to prove
its maintenance costs peanuts!

Take an Impact Wrench that's built with extra ruggedness clear through. Take a Factory Service Branch network that keeps accurate repair records. Result: *proof positive* that Black & Decker Impact Wrenches have a phenomenally low maintenance cost.

No other Impact Wrench approaches the Black & Decker because no other Impact Wrench can match the power, speed and maintenance-free construction of a Black & Decker. From drive spindle to reversing ring, every part has been designed to eliminate breakdown problems.

Wherever a bolt must be spun—in motor, drive-line or body work, wheel changes, and general maintenance

—a Black & Decker Impact Wrench does the job faster, with less fatigue, for more profit. Mail the coupon or call your Black & Decker jobber for a free demonstration. You can put one to work for . . .

—as little as \$2.07 a week

No interest or carrying charges



Leading jobbers
everywhere sell



Black & Decker®

Quality Electric Tools

THE BLACK & DECKER MFG. CO., Dept. 5101
Towson 4, Md. (In Canada: Brockville, Ont.)

- ☐ Please arrange a demonstration of a B&D Impact Wrench.
☐ Please send additional information on.....

Name.....Title.....

Company.....

Address.....

City.....Zone.....State.....



☐ Belt Sanders



☐ Polishers



☐ Valve Refacers



☐ Drills



A highlight of the national sales convention of the Big Four Industries in Cincinnati recently was the appointment of David W. Besuden as vice president of Sales. At announcement ceremony, Big Four president Vernon H. Hildebrandt (left) congratulates Dave while Dave's wife presents him with a kiss. Beaming with maternal pride at ceremony is Dave's Mother (right).

Junior Car Sales . . .

Continued from page 104

4. Establish a compensation plan for salesmen based on gross profit, with an added incentive for volume.

5. Keep an adequate inventory of desirable models and colors. A stock of cars ready for quick delivery.

6. Embark on a continuing quality advertising program to stimulate floor traffic . . . advertising his own dealership.

7. Insist on a demonstration ride for every suspect or prospect.

8. Plan and use a high grade prospect follow-up system.

9. Train your people and then make it a perpetual sales-training program.

Any dealer who doesn't make money this year, is in the wrong business. Take any town where there are two dealers facing the same problems—one makes money and the other loses. The difference? It isn't the car—it's the man in management.

Transistors

Continued from page 105

The transistor is made up of three small sections of "P" and "N" type material. Joined together and enclosed in a case. Two combinations of this material result in "PNP" and "NPN" type transistors. If only two sections of material are used "PN" or "NP" they form a diode, and not a complete transistor.

Part II of this article will discuss further the electron movement in the transistor and diodes that result in a new and very effective means of controlling and regulating the output of the new automotive high output alternators.

BEST PROFIT BUILDERS FOR YOU!

Model 240-A

STEWART-WARNER ELECTRIC FUEL PUMPS

INSTANT STARTS FOR ALL ENGINES

220 Series Pump

Economical, long-lasting . . . assures trouble-free service! Delivers up to 20 gallons per hour. Self-priming; runs independently of engine. Fuel pump action accelerates when vapor appears in fuel line. Maintains an increased fuel flow until vapor is expelled. Gives you a big market because it's the universal fuel pump for all gasoline engines.

Maximum delivery! Up to 60 gallons per hour, with oversize piston, coil and power spring. Equivalent to dual fuel pump performance.

Fits all gasoline engines! Meets exact fuel demands of all engines—under all conditions. The one multi-purpose fuel pump that not only outperforms all others but meets the needs of every prospect. Make easier replacements and more sales with a smaller inventory!

Easy field service! Routine service or complete overhaul can be done by your own personnel.

6-volt and 12-volt models!

Call Your Wholesaler Today!

1840 Diversey Parkway,
Chicago 14, Ill.



INSTRUMENT DIVISION
STEWART-WARNER CORPORATION



**"My Jenny[®] is one of the
best business fill-ins
I've ever had."**

**Ben Gay says, "Jenolizing gets me \$173 extra
business every week—customers really go for it!"**



Mr. Gay charges \$5.50 each for Jenolizing auto engines; \$6.50 an hour for truck service. You can do as well! Write today.

Ben Gay, owner of Ben's Carter Service in Portland, Oregon, does a general service station business including small repair jobs.

Last January he purchased a Model 750 Hypressure Jenny. Since then he has used it an average of three hours a day, seven days a week, cleaning and Jenolizing auto and truck motors and construction equipment. With every wash job a quick pass of the Jenny cleaning spray whisks dirt from whitewall tires.

Result? An average \$173 extra business for just twenty-one hours work a week!

Investigate this profit-maker! Write today for full information. Bulletin AEP-1 gives you full details including time payment plan.



Send me full information on Jenolizing.

Name.....Title.....

Company.....

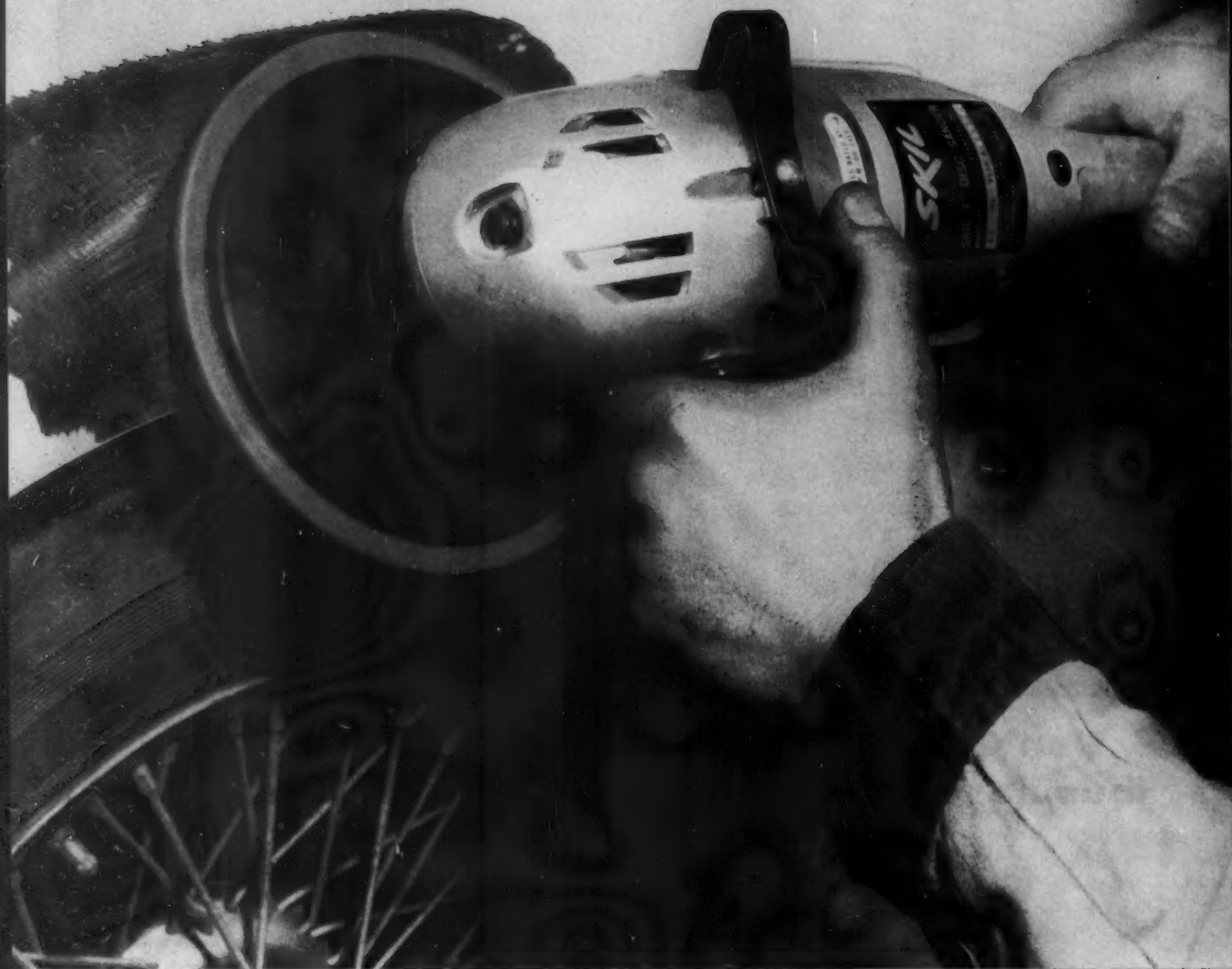
Address.....

City.....Zone.....State.....

h v

HOMESTEAD VALVE MANUFACTURING COMPANY

Hypressure Jenny Division—Corasopolis, Pa.
(In Canada: Hypressure Jenny Sales & Service, Ltd.,
517 Jarvis Street, Toronto 5, Ont. C.S.A. Approved.)



Sands rings around the rest!

SKIL—Most powerful of the 5 leading disc sanders

Check the chart at right. It's proof that powerhouse Skil disc sanders give you more work-saving power than the other four leading makes.

And "most powerful" is just one of the advantages. Your Skil distributor can show you that Skil disc sanders have what it takes in the easy handling and maintenance-free departments, too. He's listed under "Tools, Electric" in the Yellow Pages.

Or for full information write to Skil Corporation, 5033 Elston Avenue, Chicago 30, Illinois, Dept. MGT-10; in Canada: 3601 Dundas Street West, Toronto 9, Ontario.

9" Models	SKIL #852	Brand A	Brand B	Brand C	Brand D
Amp. Rating	12	10	8	11.5	10
Max. H.P.	2.48	2.2	1.3	1.70	1.92
Net Wt.	12¼	12¼	14	12¼	15¼
7" Models	SKIL #853	Brand A	Brand B	Brand C	Brand D
Amp. Rating	12	10	8	8.5	9
Max. H.P.	2.48	2.2	1.4	1.69	1.03
Net Wt.	12¼	12¼	14	12¼	13¼



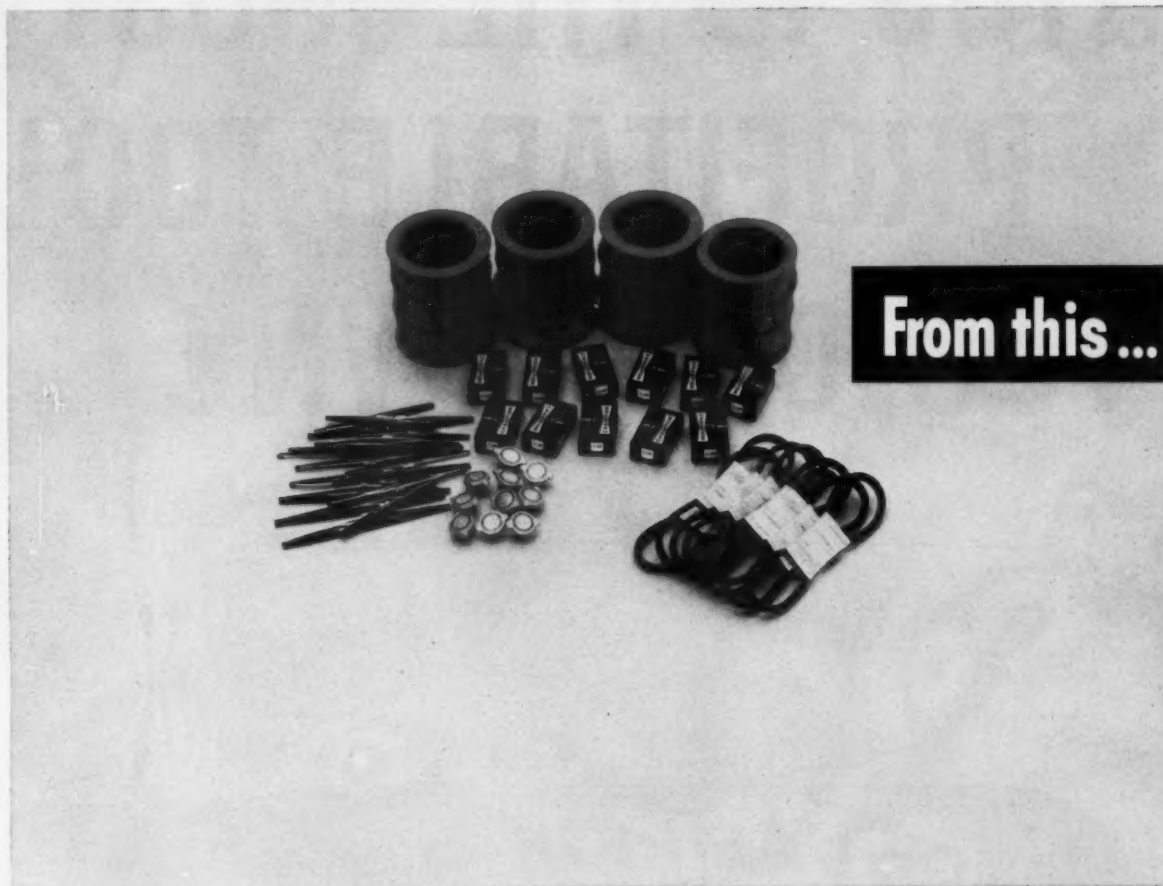
...and SKILSAW POWER TOOLS

ON THE NEXT TWO PAGES YOU'LL SEE PROOF THAT...

THIS IS THE MOST PROFITABLE TOOL YOU CAN OWN!



Here's another example of how a Champion



Using a Champion "Plug-Scope," Chicago dealer Bill Henne more than tripled his average month's spark plug sales (110 to 380). Use of the "Plug-Scope" upped

A Champion "Plug-Scope" is the most profitable tool you can own! That's because this new tool helps you sell more spark plugs—and many other items, too. These photos show the difference a "Plug-Scope" made for a Chicago dealer . . .

The "Plug-Scope" increases spark plug sales by giving you a fast, easy way to check plugs on every car. With half the cars in use needing new plugs, sales soar!

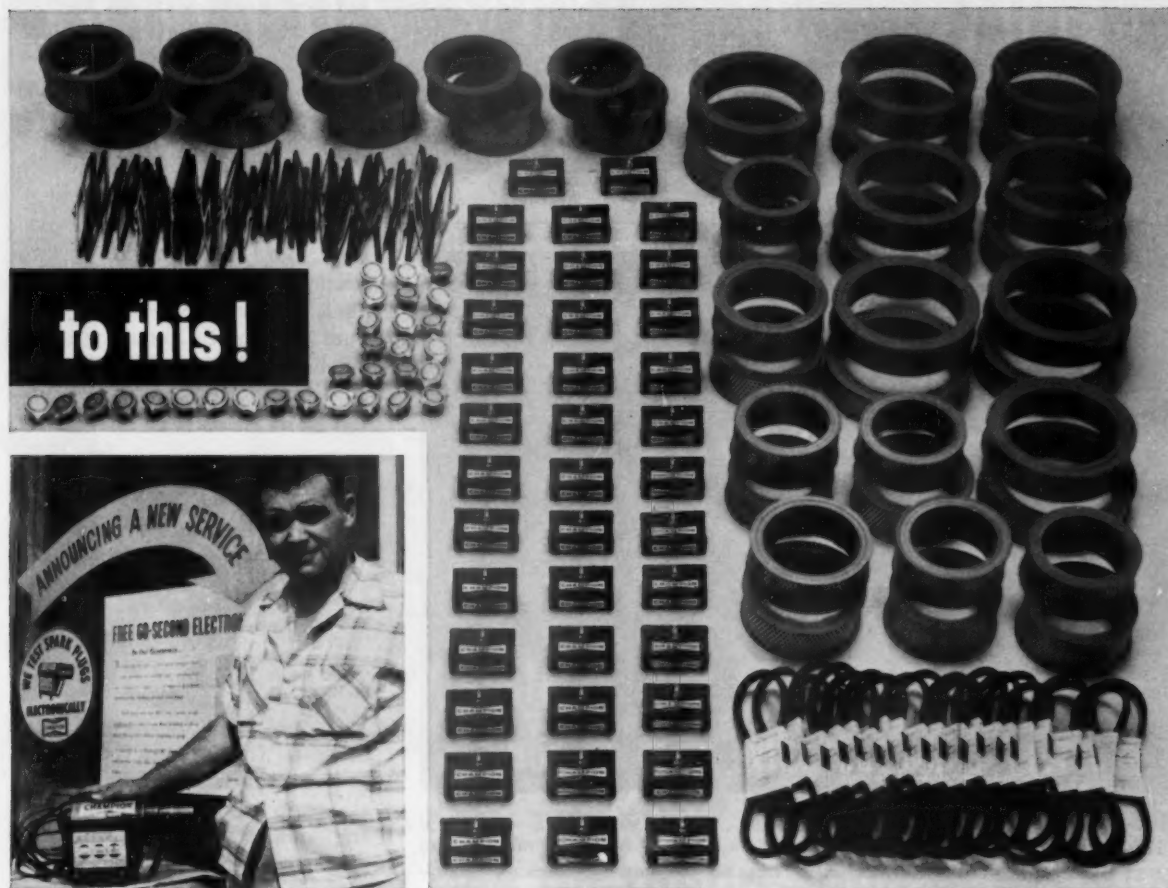
Points and condensers are a natural tie-in with these plug sales. The "Plug-Scope" sells ignition cables because the test shows up defective wiring. Hooking up the instrument spotlights the battery, battery cables, and battery hold-down brackets.

The Champion "Plug-Scope" sparks sales of other items, too. Flooring the accelerator for the test makes a loose fan belt sound off with a

CHAMPION SPARK PLUG

Chilton's MOTOR AGE • January 1960

"Plug-Scope" can increase your sales



fan belt sales from 8 to 20, air cleaners from 12 to 40, wiper blades from 8 to 25 pairs, and radiator caps from 10 to 30. Battery sales increased, too—by 20%.

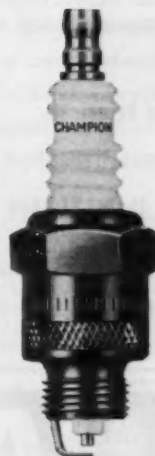
telltale squeak. When a motorist agrees to let you go under his hood with a "Plug-Scope," he's interested in the condition of his car. And when you point out that he needs a new air cleaner, oil filter, or other item, he's much more likely to buy.

Dealers have been testing the "Plug-Scope" since last spring. With every one, experience has shown that the "Plug-Scope" boosts sales of many different items. That's why a Champion "Plug-Scope" is the most profitable tool you can own. And why you should order your Champion "Plug-Scope" right now!

America's favorite . . . 5-rib

CHAMPION

SPARK PLUGS



COMPANY • TOLEDO 1, OHIO

Chilton's MOTOR AGE • January 1960

New Products

Continued from page 108

Filter Wall Chart

*Lists replacement filters
for cars and trucks*

Purolator Products Inc.: A new, streamlined version of the oil, air and fuel Specification Wall Chart has just been announced. Chart lists the replacement fil-

ters for American and foreign cars and light trucks with a simplified cross reference of all filter stock numbers. The first page lists every American automobile, each model and the oil, air and fuel filter installation procedure, with pictures, the oil filter kits for cars not regularly equipped and company's display material available to dealers. Write: Purolator Products Inc., 970 New Brunswick Ave., Rahway, N.J.



This exclusive eccentric grinding method is faster, too—beats job rates, makes more money. Hall-Toledo's Model EJ services all automotive engines with jewel-like efficiency and handles seats up to three inches in diameter.

Because of its patented eccentric grinding principle, the Model EJ is the most accurate, yet the easiest to use seat grinder available. It costs less to operate, too, because grinding wheels and pilots last longer. Ask your jobber or write direct.

see an actual
demonstration
at the IASI show
—NADA—
convention

Please send information on the items checked. No obligation.

☐ Valve seat grinders for Automotive, Diesel and Aircraft engines. ☐ Valve Guide Reamer and Seat Insert. ☐ Expanding Pilots, Grinding Wheels ☐ Cylinder Hones.

Name _____

Street _____

City _____ Zone _____ State _____

**HALL
TOLEDO**

TOLEDO 9, OHIO

Parts Catalog

*Axle or Brake replacement
parts listed*

Shuler Axle Co.: A new 36-page, 1960 issue of this company's Service Parts Catalog is now ready for distribution. Products covered include company's new FTL Lightweight Brakes (fabricated tapered lining) and the new "pusher type" drop center axles. All parts are shown in large photographs. Principal dimensions are given for each part. For more information write: Richard C. Carson, Vice President, Shuler Axle Co., 2909 South Second St., Louisville, Ky., or phone MELrose 7-2571.

Oil Seal Booklet

*Points out value of oil seals
to driving safety*

Chicago Rawhide Mfg. Co.: Written especially for service stations and repair shop, entitled "Seal Every Sale for Safety," has been introduced. It shows a dealer how to quickly determine the amount of money he can make per week on oil seal sales. Stressed throughout the booklet is the fact that driving safety starts in the service shop. It is the dealer's responsibility to properly service every car for maximum operating safety and efficiency. Since oil seals retain necessary lubrication while keeping dust and dirt from critical moving parts, they are vital to the proper functioning of a vehicle it is stated. Write: Chicago Rawhide Mfg. Co., 1301 Elston Ave., Chicago 22, Ill.

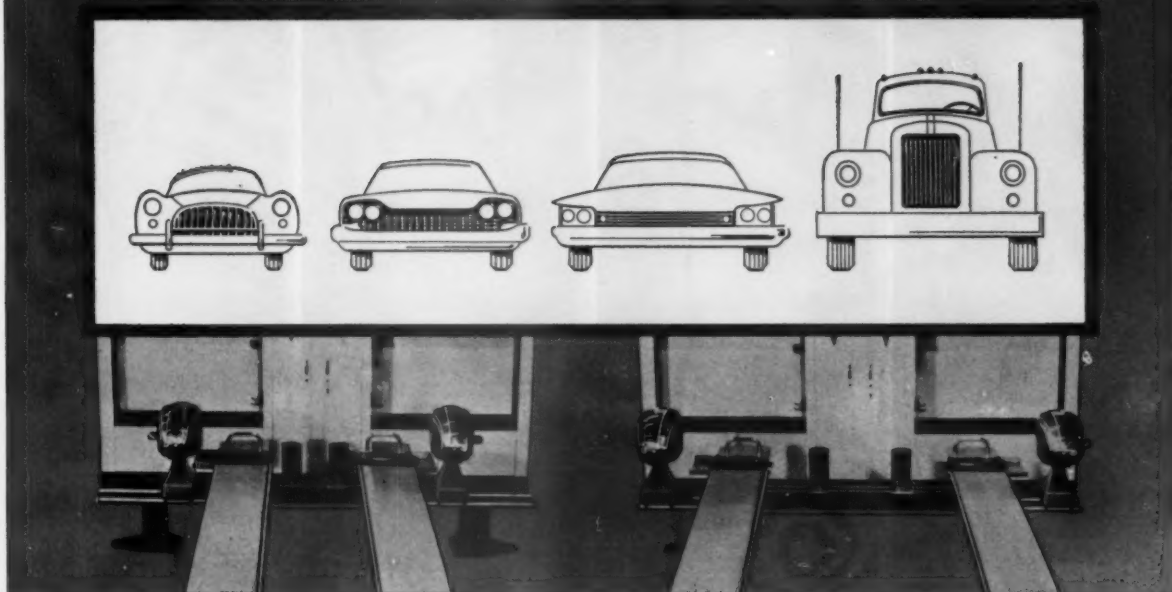
Dillmobile Catalog

*Describes mobile and tube
repair center*

Dill Mfg. Co.: A one-page catalog sheet, illustrating and describing its new Dillmobile, new mobile tire and tube repair center, has just been published. The literature pictures this caster-mounted stand in use at the point of repair

Continued on page 120

BIG CARS · COMPACT CARS SMALL CARS · SPORTS CARS · IMPORTS TRUCKS · BUSES



John BEAN VARIABLE-TREAD **VISUALINER** MAKES ANY CAR OR TRUCK YOUR CUSTOMER

Every driver is your customer for wheel aligning when you're equipped with John Bean's variable-tread VISUALINER. Adjustable runways on rollers glide in and out easily, take any car tread widths from 40 to 68 inches, truck tread widths to 90 inches. Famous VISUALINER optical aligning system is fast, fool-proof, unaffected by electrical current fluctuations. You'll never turn away a job with VISUALINER, whether it's a "bug", big car, bus or truck. Pit and floor models also available with portable or mechanical gauges.

MODERNIZE YOUR PRESENT EQUIPMENT!

Variable-tread racks • VISUALINER projection heads • extra-wide viewing screens • remote control steering wheel turners • air jacks • late-model Buick-Chrysler-Chevrolet camber correction tools. Gives you modern VISUALINER versatility on a limited budget.

FREE Engineering Analysis!

Starts with your present equipment, floor space, budget, business volume . . . gives you a dollars-and-cents estimate for maximum aligning profits on a minimum budget. Learn about John Bean's Training School and On-The-Job Training Programs. Contact John Bean Automotive, Lansing, Michigan.

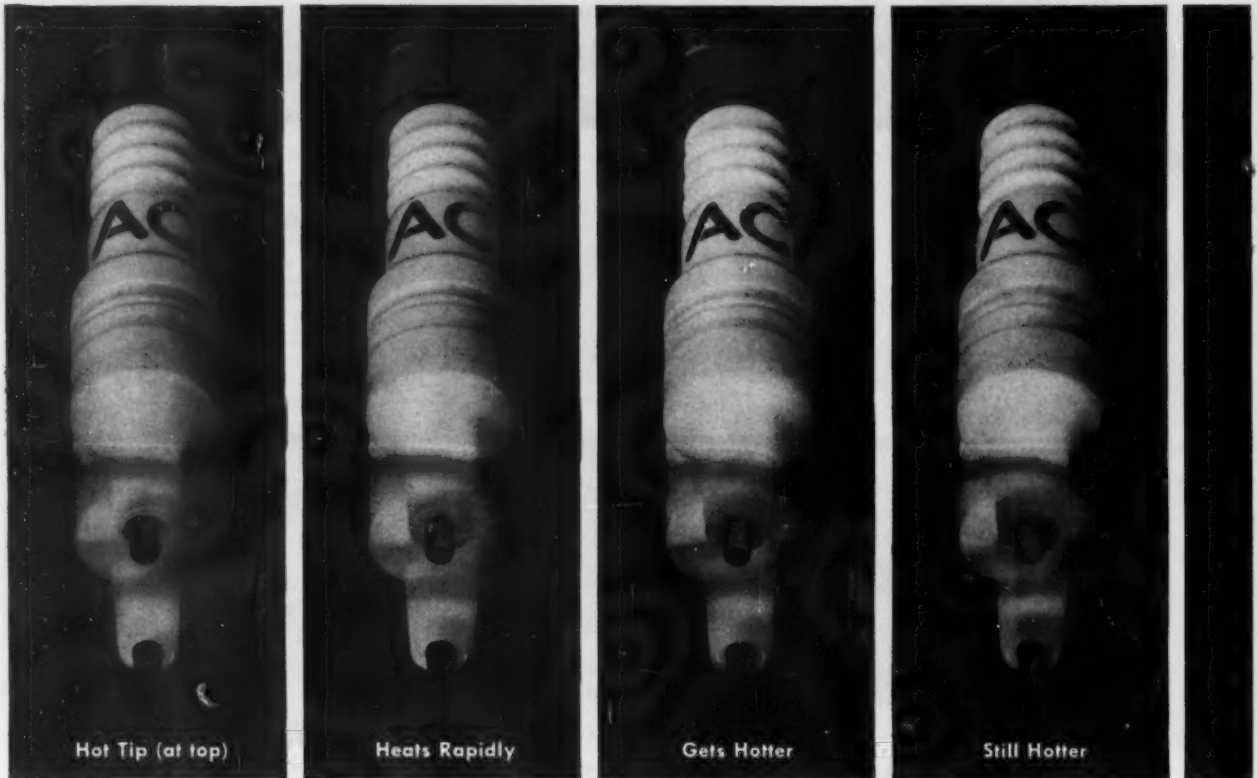
John
BEAN®

DIVISION OF
FOOD MACHINERY AND CHEMICAL CORPORATION
LANSING, MICHIGAN



BLOW-TORCH TEST SHOWS . .

Heats Faster .



...to give you the greatest per-

The dramatic picture sequence above proves the ability of AC's exclusive "Hot Tip" design, to outperform other spark plugs.

The photographs show the insulator of an AC "Hot Tip" and one of another spark plug, placed in the 2000° heat of a blow torch. (The torch flame is shown traveling from right to left in the first four pictures.)

AC's "Hot Tip" heats up instantly, while the other tip heats up more slowly.

This means that AC's exclusive "Hot Tip" burns off carbon deposits as soon as they form, stays clean longer

under severest conditions for longer spark plug life.

Removed from the flame, the "Hot Tip" cools instantly, while the other tip cools more slowly. This instant cooling prevents engine damaging pre-ignition that can cause loss of power and gasoline mileage.

Put this important AC product superiority to work in the cars and trucks you service. Complete customer satisfaction is your best asset for continued profit.

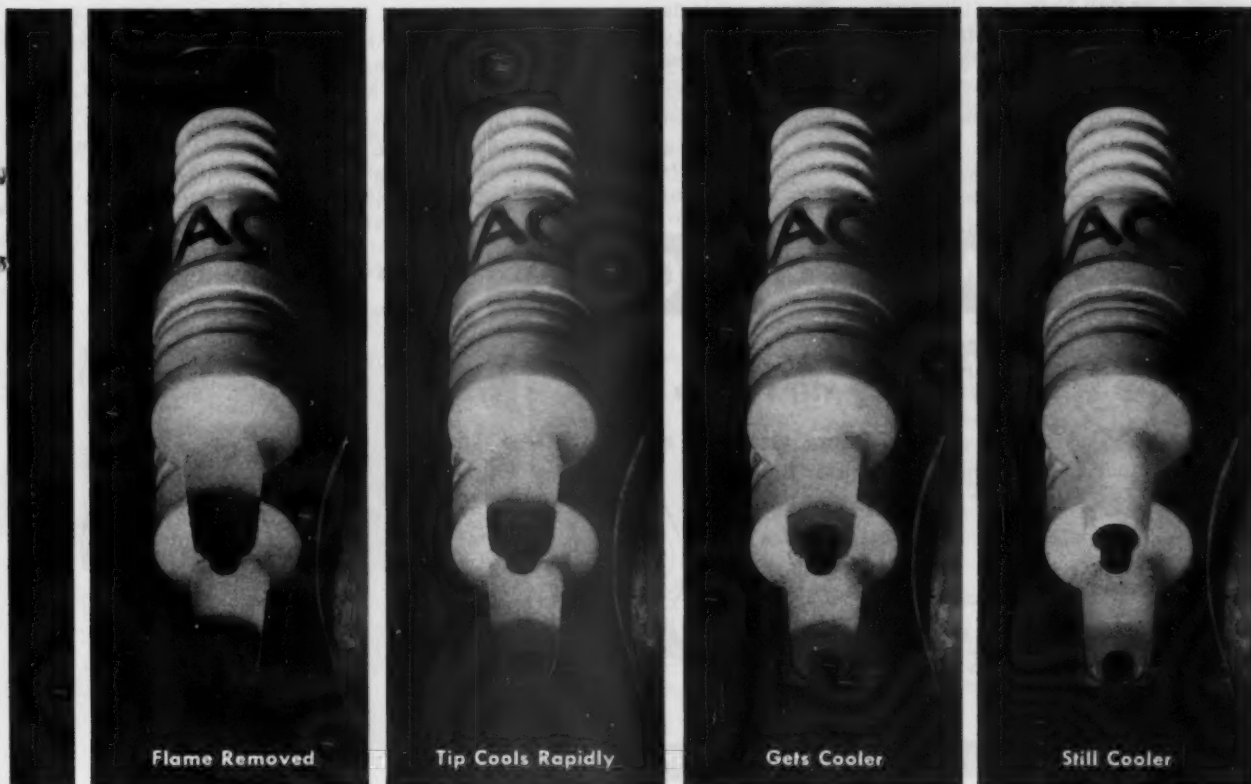
THEY MUST BE THE BEST!

RECOMMEND
AND INSTALL

new AC Fire-Ring

. FAMOUS AC "HOT TIP"

.. Cools Faster



Flame Removed

Tip Cools Rapidly

Gets Cooler

Still Cooler

-formance story in the industry!

**AC Offers
Finest Features
in the Industry**

- Recessed Hot Tip
- Longer Flash-over Path
- Isovolt Electrode
- Aluminum Oxide Insulation
- Buttress Top Design
- Internal Copper Glass Seal
- Larger Scavenging Area
- Cico Weld Sealed Insulator



AC PRESENTS THE ART CARNEY SHOW, NBC-TV, January 8

Spark Plugs

AC SPARK PLUG
THE ELECTRONICS DIVISION
OF GENERAL MOTORS

New Products

Continued from page 116

either inside or outside, or as a permanent workbench. Detailed specifications of the unit, accessories and supplies normally used, plus day-to-day application features are likewise included. Write: L. S. Petrovich, Adv. Mgr., Dill Mfg. Co., 700 E. 82nd St., Cleveland 3, Ohio, or phone UTah 1-3200.

Equipment Catalog

Covers range of wheel alignment equipment

Weaver Mfg. Company: A wide range of wheel-alignment equipment for garage and service-station use is described and illustrated in a twenty-page, two-color catalog just issued. Featured in the catalog are "Twin Post Lift" wheel alignment outfits, for wheel alignment service

on passenger cars and light trucks and mechanical services on both cars and trucks. In addition, the catalog covers "Rack Type" wheel alignment equipment with adjustable treads as well as "on-the-floor" outfits. Also included are descriptions and specifications of lifts, jacks, gages, service steps and stands, axle straighteners, camber correctors and suspension calipers. Write: Weaver Mfg. Co., 2177-79 South 9th St., Springfield, Ill., ask for catalog PL-486-5.

SPEAKING of K-D TOOLS



KEEP THAT HEAD ON!

SAVE 2 hours, and MORE removing that weak or broken valve spring. For FORD OHV since 1952.

K-D 915
\$165

ALL PRICES SHOWN ARE EASTERN RESALE, HIGHER WEST



HERE--To grind valves in small motors

K-D 501
\$115

Hand grinder for peanut size cars and fractional h.p. engines. Replaceable rubber cups $\frac{3}{8}$ " & $\frac{1}{4}$ " diams. High impact plastic handle.



NOW!

ONE TOOL handles BOTH MOLDING CLIPS

K-D 441
\$345

Reversible Jaws

Expands clip to secure it in body. Safety jaw design reduces old problems of clip breakage. Jaws reverse quickly for clip type in use. Powerful, rugged, rustproofed.



For LOCKHEED Return Springs

Removes, replaces. Will work on total contact brakes.

\$175

RUSH OUT AND BUY K-D TOOLS

FREE! Big catalog. K-D Mfg. Co., Lancaster, Pa., U.S.A.

Rust Eraser

Removes rust spots from chrome



Buick Motor Division, G.M.C.: new product called Rust Eraser, is said to remove rust spots from automotive chrome is being marketed by Buick. It contains no corrosive materials, it is stated. A non-acid and non-alkaline composition of polyvinyl acetate sponge, Buick Rust Eraser, it is claimed, becomes soft and pliable and ready for use when soaked in water. After use, it dries to its original consistency. Although developed primarily for removing rust from chrome, it is also effective for cleaning white sidewall tires and for cleaning and polishing copper, brass, porcelain and steel surfaces.

Jig Saw

Includes built-in saw-dust blowers

Portable Electric Tools, Inc.: The new PET Model 2150 Jig Saw will cut up to 2 inch lumber, light gauge metals, plastics, etc.; up to 17 inch perfect circles; up to 45 degree bevels either right or

Continued on page 124

The Franchise With A Future Starts You Cashing In Today!

A Dayton Franchise is a dealer's franchise—set up to provide dealers with immediate major benefits . . . and aimed, too, at enabling them to build a profitable future for themselves.

Check these money-making features of the Dayton Franchise and you'll see why Dayton's dealer organization is growing so fast. Why not grow with it? Quickest way to start is for you to send in the coupon below TODAY!



All Nylon Dayton Thorobred Blue Ribbon

Dayton Thorobreds



A Complete Line of Passenger Car, Truck,
Farm Tractor and Implement Tires and Tubes

The Dayton Rubber Co. • Tire Division • Dayton 1, Ohio

Get in the
Winner's Circle
with a Dayton
Franchise →

COMPLETE, HIGHEST QUALITY LINE—Designed for up-grading tire sales and profits, the Thorobred line is the result of over 50 years of Dayton research.

BETTER PROFIT SET-UP—The Dayton Franchise is keyed to *you*, the dealer! Greater dealer support, more customer satisfaction, bigger profit margins make it a *dealer's* Franchise!

"EXCLUSIVITY" IN YOUR AREA—Dayton dealers are protected against having to compete among themselves.

NEW, STRONGER GUARANTEE—Dayton Thorobred Tires are completely backed by a *completely* frank, straight-forward Service Guarantee. No "gimmicks" . . . no double-talk!

READY AVAILABILITY OF STOCK—Dayton's warehouse and retreading facilities all over the U.S. provide complete, readily available stock for its rapidly growing dealer organization.

LIBERAL ADJUSTMENT POLICY—Dayton dealers make immediate, on-the-spot adjustments . . . no delay, no waiting for factory representatives, no "red tape".

GENEROUS ADVERTISING AND MERCHANDISING HELP—Dayton has a liberal co-op advertising program, pays entirely for considerable "plus" advertising that benefits dealers.

MODERN, PROGRESSIVE IDENTIFICATION PROGRAM—Dayton provides a complete array of attractive signs, display materials, banners designed to bring in customers.

MAIL THIS COUPON TODAY!

The Dayton Rubber Company
Tire Division • Dayton 1, Ohio

Please send me the complete Thorobred Story and details on the money-making Dayton Franchise.

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Valiant Continued from page 41

five turns. Check adjusting screw for free turning in the case; then tighten band adjusting screw to a reading of 47-50 in. lb. torque. Back off adjusting screw 2³/₈ turns. Hold adjusting screw in this position and tighten lock nut to 20-25 ft. lb. torque.

Low and Reverse Band:

Procedure for the low or reverse

band: Raise car, drain transmission fluid and remove the oil pan. Loosen the adjusting screw lock nut and back off the nut approximately five turns, then tighten band adjusting screw to a reading of 47-50 in. lb. torque. Back off adjusting screw 5¹/₄ turns, and tighten pan bolts to 13 to 17 ft. lb. torque.

For throttle linkage adjustment:



WEATHERHEAD'S NEW FUEL-LINE MAKE-UP KIT for ALL late model cars

Replacement of faulty fuel lines can be profitable—provided a big inventory of seldom-used assemblies doesn't soak up all your margin.

Here's a kit that takes care of all that. No assemblies. This new Weatherhead FL-85 Kit consists of just twenty-five feet of ⁵/₁₆" hose, ten feet of ³/₈" hose and an assortment of a total of thirty-nine ends and clamps for the two hose sizes. You pay only for the contents. The sturdy dual-purpose counter display and handy dispenser is free.

With this low-cost minimum-inventory kit (dollars less than anything else available) you can make up your own assemblies to handle fuel-line repairs on

all late model cars. Your profit is \$8.23 on the parts alone—and your labor charges for this simple, quick job can double that figure easily.

You can't afford to be without this high-profit, low-ticket FL-85 kit—the most complete, yet simplest and fastest moving one on the market. Order one from your Weatherhead jobber today, and cash in on this extra-profit work.

AND FOR OLDER CARS

The BL-13 Barbliner Kit handles most all low-pressure fuel, oil and air line replacements. Still available from your Weatherhead jobber.



With the engine at operating temperature and carburetor off it's fast idle cam, adjust idle speed to 475-500 rpm. Loosen lock nut and move the transmission throttle control lever forward until it stops. Then tighten lock nut securely. Adjust a spirit level protractor to 115 degrees, then place protractor lengthwise on flat face of the accelerator pedal.

With car on level floor, disconnect the accelerator pedal rod and adjust length of road-to-enter the spirit level. After correct pedal angle is obtained, reconnect the pedal rod.

Axle Shaft Removal

After removing wheel, remove clips holding brake drum on wheel studs and remove drum.

Disconnect brake lines at wheel cylinders. Insert socket through holes provided in axle flange to remove retainer nuts from end of housing. Attach axle shaft puller to axle shaft flange and remove axle shaft using care to avoid damaging the axle seal contact area.

Clutch Adjustment

Shorten or lengthen the clutch, release fork rod by turning the adjusting nut until there is a ⁵/₃₂ in. free movement of the clutch fork outer end. This will give the necessary 1 in. free play at the pedal.

Adjusting front suspension height: Front end can be raised or lowered by turning the torsion bar anchor adjusting nut clockwise to increase height and counterclockwise to decrease the height.

Front End Specifications:

Toe-in ¹/₈ plus or minus ¹/₃₂ inch
Camber plus ³/₈ degrees left side
plus ¹/₈ degree right side
Caster Powering Steering ³/₄ plus.
Manual Steering minus ¹/₂ degree.

Specifications on Valiant:

Bore and Stroke 3.40 x 3.125
Piston Displacement 170 cu. in.
Compression Ratio 8.5 to 1
Horse Power 101 @ 4400 rpm.
Battery 12 volt
Crankcase Capacity 4 qts.

Continued on page 124

Better fluid!

Gabriel's exclusive X-300 fluid has just the right viscosity for top shock absorber performance . . . and is virtually unaffected by changes in temperature. Provides far more uniform ride control in any weather.

Better seal!

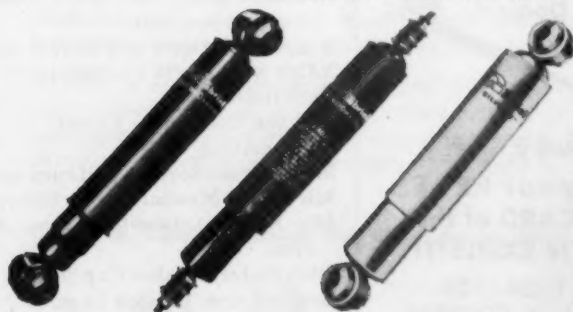
Gabriel's exclusive O-ring seal prevents oil from leaking past the piston to upset calibrated control . . . helps provide more dependable damping both on compression and rebound strokes.

Better piston area!

Gabriel's 7/16 in. piston rod permits more *piston surface* to be exposed. Remember: you get damping control from the piston area, not the rod. Gabriel provides larger piston area.

Better get Gabriel!

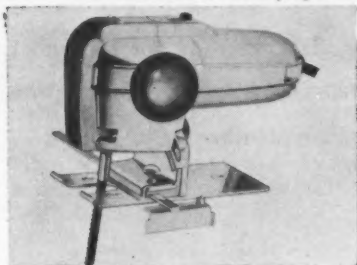
The fact is Gabriel shocks are so much better than any other shocks it isn't even funny. Gabriel is the nation's oldest and largest independent manufacturer of shock absorbers. Gabriel makes the most complete line for replacement . . . and Gabriel shocks are original equipment on more makes of cars and trucks than any other line. See your jobber for the full story why Gabriel shock absorbers absorb shocks best!



THE GABRIEL COMPANY, Cleveland 15, Ohio

New Products

Continued from page 120



left, company states. Other features include built-in light, saw-

dust blower to keep working area clean, ten foot 3-wire rubber conductor cord and adapter, auxiliary handle for accurate feather touch control, 8 inch rip and circle cutting guide. Blade design permits saw to make its own starting hole on inside or plunge cuts, with a full $\frac{5}{8}$ inch stroke, manufacturer claims. For more information write: Portable Electric Tools, 320 West 83rd St., Chicago 20, Ill.



2 TUNGSTEN IGNITION CABINETS will be won by

A
Lucky
Jobber!

A
Lucky
Dealer!



Be the Lucky One!

**Ask for your FREE
CONTEST CARD at the
TUNGSTEN EXHIBIT!**

**BOOTHS 1124-1126
IASI SHOW.. N. Y. COLISEUM
Write for Catalog**

TUNGSTEN CONTACT MANUFACTURING CO., INC. North Bergen, N. J.

Tire Changer

*Has no cams, levers
or special adjustments*

Big Four Industries, Inc.: The Big Four Henderson Mark I Tire Changer is said to offer new concept in power. It provides power with direct thrust right in line with both bead-breakers, company states. There are no cams, levers, or special adjustments. The Mark I has power for the most stubborn beads even on line pressures as low as 125 pounds. Other features: tapered table top for positive bead-breaking on all wheels 12 to 17 inch. Safety-flate automatically shuts off air at pre-set pressure. Wedge-wing bead-breakers break both beads at same time. Model will handle all wheels now on the road, including the Valiant, Corvair, Falcon and the Volkswagen. For more information write: Lewis W. Selmeier, Big Four Industries, Lewis W. Selmeier, 811 Race St., Cincinnati 2, Ohio, or phone Parkway 1-5515.

Shop owner: "Why did you leave your last job?"

Applicant: "Illness."

Shop owner: "What sort of illness?"

Applicant: "My boss said he was sick of me."

Chrysler Valiant . . .

Continued from page 122

Cooling System Capacity 13 qts
add 1 qt. for heater

Fuel Capacity 13 gallons

Tire Size 650 x 13

Brakes: Lining Size 9 x 2 $\frac{1}{2}$ front;
9 x 2 inches rear.

Tappet Clearance .010 to .020 inch
Valve Seat Angle 45 degrees

Carburetor

Ball and Ball Single Throat

Float Setting $\frac{7}{32}$ in.

Idle Mixture Screw 7 full turn open

Idle Speed Manual Trans. 550 rpm

Idle Speed Automatic Trans. 500 rpm.

Distributor Breaker Gap .020 in.

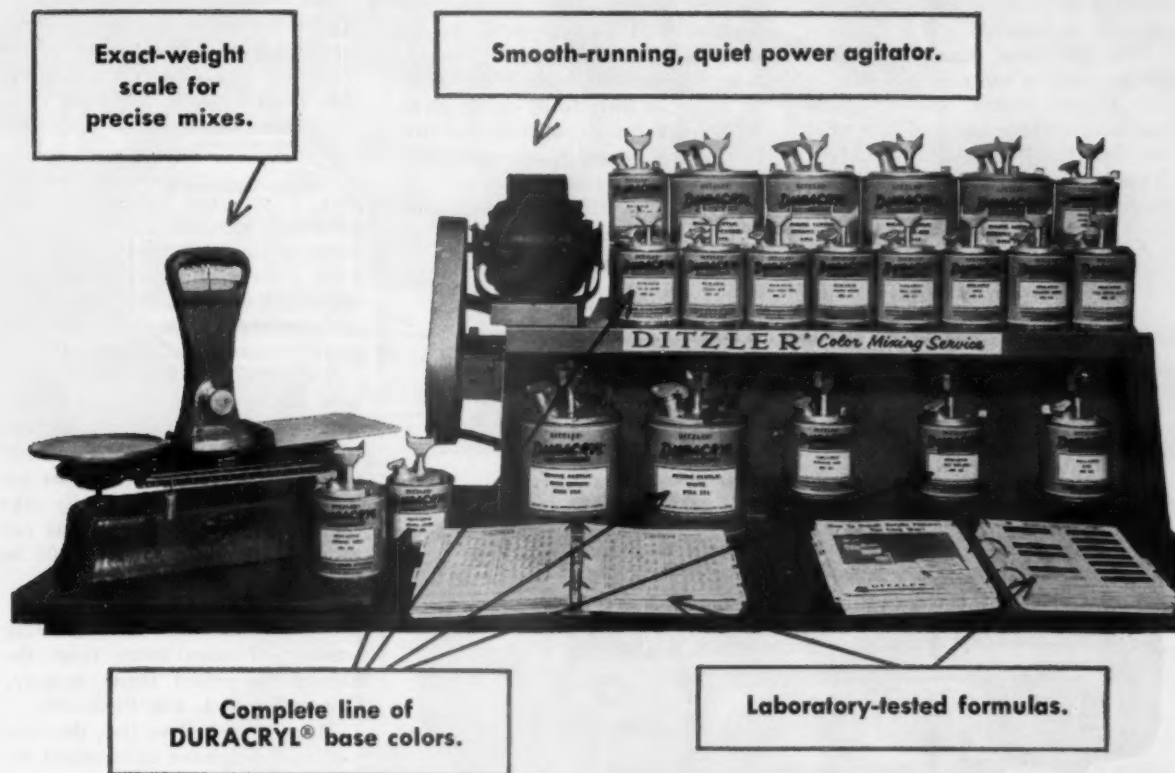
Breaker Arm Tension 19 oz.

Ignition Timing 5 degrees BTC @
500 rpm.

Spark Plug Gap .035 inch

Firing Order 1-5-3-6-2-4

Build Your Service Reputation for Acrylic Repairs



Ditzler's ACRYLIC COLOR MIXING SERVICE gives you true acrylic colors, not modified lacquers.

Formore than a year, refinishing shops all over the country have been using Ditzler's Acrylic Color Mixing Service to match the acrylic colors featured on many of today's new cars.

- With this color system they have been able to duplicate easily and quickly these brilliant new hues with true acrylic colors, not modified lacquers.
- Ditzler's Acrylic Mixing Service provides you with a complete new series of DURACRYL base colors and hundreds of laboratory-tested formulas. With it you can duplicate precisely the beauty

and depth of color, high gloss and outstanding durability of these modern finishes. And you can prepare the exact amount you need for a repair or a complete refinishing job, without waiting or waste.

- Why not take advantage of the opportunities for added profitable business on millions of new cars finished with acrylics? Ask your nearest Ditzler jobber for more information about this Ditzler color mixing service which has proved so satisfactory in so many shops the country over.

Ditzler Color Division, Pittsburgh Plate Glass Company, Detroit 4, Michigan • Torrance, California



DITZLER®

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



"Imports to stay" Continued from page 43

had doubled to 206,000. In 1958, 377,000 imported cars were sold, and it is estimated that in 1959 at least 600,000 of these imported cars will be sold in America.

The 1959 sales represents almost 11 per cent of the new cars sold in the United States, and about 70 per cent of these cars fall into what we call the "economy car" class. These economy cars sell to the customer from \$1,100 up to \$2,000 with

all accessories, except radios and automatic transmissions.

This group of economy cars seats between four and five adults comfortably and gets from 30 to 60 miles per gallon of gas, with maximum speeds that vary from about 50 miles an hour to 90 or 95 miles an hour, certainly, speeds that are comparable to the maximum speed limits on American highways.

We think it is fair to say that it

was not because of any understanding of the advantages of small cars, nor was it because of any particular desire to sell to the American people the kind of car they wanted to buy that caused the "Big Three" to finally introduce their compact cars. We believe that it was the cold hard business fact of the success of the imported cars and the success of the Rambler and the Lark that forced the "Big Three" to introduce their compact cars.

Since the introduction of the Corvair, Falcon, and Valiant, we have noticed a distinct uptrend in the sales of our Fiat 1100 Sedans and 1200 Sedans. Both of these cars carry a Port of Entry price, fully equipped, except for radio and automatic transmission, of under \$2,000.

We do believe that the compact cars of the American "Big Three" will have an effect and an important effect upon the American automotive industry. First of all, we believe that they will definitely take sales away from the imported car group which sells from \$2,000 to \$3,000.

Secondly, we believe that the compact cars will take an increasing number of sales away from the former low-priced three, namely: Ford, Chevrolet, and Plymouth.

Thirdly, we believe that the compact cars will have an excellent export market.

This latter point is of particular importance because the export market has in recent years shunned the increasingly higher-priced, over-powered, and over-sized American cars. The American automobile in many parts of the world is an item of prestige, just as the imported car is a matter of prestige in America.

The American compact car is better equipped to operate on European and roads of other foreign territories than are their bigger brothers and the price is more in line with what the average person can afford in the export market.

There is an increasing number of Americans who want to buy a car for basic transportation at the lowest price, with maximum performance and the lowest possible maintenance and operating costs. Some will buy compact, but many and we believe an increasing number will buy the imported economy car.

WANTED

DEALERS FOR THE NOVI DELUXE AUTOMOBILE AIR CONDITIONERS



NOVI No. 1 QUALITY PERFORMANCE PRICE

Superior Cooling
Beautiful Design Advanced Engineering
Greatly Reduced Installation Time

Adapter kits packaged and sold separately for greater flexibility in sales. Five Novi warehouses assure fast delivery and lower inventory investment.

90 DAY WARRANTY ON PARTS

**SPECIAL
DEALER
PRICE**

\$182⁵⁰

Complete with clutch
Federal Excise Tax
included.

F.O.B. nearest Novi warehouse

NOVI SALES AND SERVICE CO., INC.

WAREHOUSES: 2501 South Grand Avenue, Los Angeles, Calif. • 2112 West 7th Street, Fort Worth, Texas • 2932 Troost Avenue, Kansas City, Missouri • 20830 Coolidge Hwy, Detroit, Mich. • 190 Fourteenth St., N.W., Atlanta, Ga.

For information, write Novi Sales and Service, 20830 Coolidge Hwy, Detroit, Michigan

for shelf-life that's \$hort and \$weet...

it's



Salesman, Serviceman, Counterman or Chief . . . in thousands of establishments, busy hands reach for EIS Brake Parts . . . and for good reason: every part in "The Brake Parts Line" is engineered with a single objective . . . to do the job better and more profitably. No dust-catchers here . . . just fast turnover and that's what adds up!

"E" Series HRC* WHEEL CYLINDER CUPS with Expanders and Springs..BUILT INTO EVERY EIS WHEEL CYLINDER.. INCLUDED IN EVERY EIS WHEEL CYLINDER REPAIR KIT!

Why? Because since 1956, expander-type cups have been initial equipment on 70% of American cars (including Cadillac and Imperial)!

"E" Series CUPS represent one of the many product-developments that have established EIS as THE Brake Parts Line! They're recommended for all wheel cylinder work and are available in all sizes.

*Heat-Resisting Compound

MASTER CYLINDER AND KITS • WHEEL CYLINDERS AND KITS



PLAIN CUPS • FILLER-TYPE CUPS • RIBBED CUPS • RIBBED SECONDARY CUPS



POWER BRAKE PARTS AND KITS • SWITCHES • HOSE • SAE "SUPER" BRAKE FLUIDS



Write for catalog. EIS AUTOMOTIVE CORP., Middletown, Conn.
At the IASI SHOW . . . BOOTHS 2546-2548-2645-2647

Champion REBUILT CARBURETORS

are 100%
Pre-Adjusted
to save you
valuable TIME
and MONEY!

Sell the line that's 100%
QUALITY-CONTROLLED!
CHAMPION-QUALITY lets
you turn out more jobs in less
time. Each unit is 100%
PRE-TESTED under actual
operating conditions to assure
perfect performance
without time-consuming adjustments. You install it—
and forget it. Your customers leave satisfied—and stay
that way!



Write for name of CHAMPION jobber in your city

Champion Parts Rebuilders, Inc.

1021 W. 20th, Peoria, Illinois 61604



REPAIR FOR YOUR B&D TOOLS



Check the Yellow Pages under "Tools-Electric" for
the location of the nearest Black & Decker factory
service branch or authorized service station.

Free tool inspection when requested • Genuine
B&D parts used • Factory-trained technicians
• Standard B&D Guarantee at completion of
recommended repairs • Fast service, reasonable
cost, always.

Or write for address of nearest of more than 50
branches and service stations to: THE BLACK &
DECKER MFG. CO., Dept. 5101-S, Towson 4, Md.

Black & Decker



QUALITY TOOL SERVICE

T. J. CONNORS, JR., SUPERVISOR OF
AUTOMOTIVE EQUIPMENT,
CONN. RAILWAY & LIGHTING
COMPANY, WRITES:

"HELI-COIL" INSERTS SAVE US \$315 Per Engine"



Operating 253 buses in five cities, Mr. Connors' company follows the most advanced engineering practice in reducing maintenance and repair costs. In reconditioning aluminum upper crankcases of gasoline engines, his company uses *Helicoil Inserts*... with major savings.

Mr. Connors writes:

"For permanently repairing worn and stripped threads in 116 holes in each casting with *Helicoil Stainless Steel Inserts* it costs us only \$85.00 per engine—including labor. That's a big saving over the \$400.00 it would cost for a new casting."

Helicoil Stainless Steel Inserts may offer you comparable savings. They are stocked nationally by automobile and industrial distributors. Write for full information and distributor list.

*Reg. U. S. Pat. Off.



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3001 SHELTER ROCK LANE, DANBURY, CONN.

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BALANCE THE 13" COMPACT WHEELS...

- FASTER!
- EASIER!
- SAFER!
- MORE PROFITABLE!

...with the
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127-13
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HUNTER ENGINEERING COMPANY

Hunter Ave. & Ladue Rd.,
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THE LAST



LAFF



Don't fear you'll be called a miser if you save money nowadays. You'll be called a miracle man instead.



A sweet young thing, visiting an artist in his studio, asked him if he thought he had inherited his ability.

"I don't think it happens that way," the artist said. "For instance, take the Spanish painter El Greco. Did you ever hear of El Greco's father?"

"No," the girl replied.

"Did you ever hear of his mother?"

"No."

"Now," concluded the artist, "you understand what I mean."

"Well, not exactly," said the pretty one, batting her innocent eyes. "I never heard of El Greco either."

A bachelor, left in charge of his baby niece, was faced with a crisis. He frantically called a young acquaintance who solved the problem in this man-to-man fashion: "First, place the diaper in position of a baseball diamond with you at bat. Fold second base over home plate. Place baby on pitcher's mound. Then pin first and third to home plate."

A Wisconsin farmer, visiting the big city for the first time, stopped in a fancy lounge and ordered a beer.

"How much beer do you sell a week?" he inquired.

"About 40 kegs," replied the bartender.

"I'll tell you how you can sell 80."

"Eighty kegs?" said the bartender. How?

"Simple. Fill up the glasses."

A parasite is a guy who goes through a revolving door without pushing.



It's a great pity that things weren't arranged so that an empty head, like an empty stomach, would not let its owner rest until he put something in it.






"CHECKING BELTS wins customers... increases profits!"

says George A. Millinger
Millinger Auto Repair
3970 Delor, St. Louis, Mo.



**To find belt wear always
turn belt over**—The under-
side of the belt...not the top...tells
the true condition of the belt.
**REPLACE BELTS
LIKE THESE:** 

CRACKED



GREASY



GLAZED



PEELING



SPLIT



As a member and officer of the Independent Garage Owners of America, Inc., George Millinger is a firm believer in the Association's slogan: 'Personalized Service'.

"We want to show our customers that we have a real interest in protecting them from trouble," he says. "That's one reason why we check the belts each time we service a car."

"Checking belts also means more sales for us. We now average from 30 to 40 belt sales a month—and the sales give us a good share of profit."

"Gates helps make it easy for us to win customers and boost sales. Special sales tools such as the Dial Finder and handy Display Rack enable us to find and install the right belt in just a matter of minutes. Merchandising programs, such as the Mystery Car Campaign, keep all of us on our toes."

"Since starting in business in 1948, I have always handled only quality products. So when it comes to V-belts, I choose Gates—I think they are the best on the market."

Phone today for YOUR Gates V-Belt Display Rack. Supplied by your Gates Jobber, this attractive fixture puts the right belt for any popular make of car at your fingertips.



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